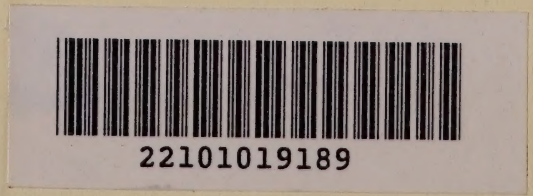
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COMPANION

TO THE NEW EDITION OF THE

BRITISH PHARMACOPŒIA.

FIFTH EDITION.

COMPANION

TO THE NEW EDITION OF THE

BRITISH PHARMACOPŒIA

1867,

COMPARING THE STRENGTH OF THE VARIOUS PREPARATIONS

WITH THOSE OF

THE LONDON, EDINBURGH, AND DUBLIN,

UNITED STATES, AND OTHER FOREIGN PHARMACOPŒIAS.

WITH

PRACTICAL HINTS ON PRESCRIBING.

BY

PETER SQUIRE, F.L.S.,

CHEMIST ON THE ESTABLISHMENT OF THE QUEEN,
CHEMIST IN ORDINARY TO THE PRINCE OF WALES, AND THE ROYAL FAMILY,
LATE PRESIDENT OF THE PHARMACEUTICAL SOCIETY.

Fifth Edition.

LONDON:

JOHN CHURCHILL AND SONS, NEW BURLINGTON STREET.

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TO

SIR JAMES CLARK, BART., K.C.B., M.D., F.R.S.

My dear Sir,

You were good enough to allow me to dedicate to you my FIRST *work, 'A Comparison of the London, Edinburgh, and Dublin Pharmacopœias.'*

It was at your suggestion that I therein drew attention to the dangerous differences between preparations, nominally the same, in those Pharmacopœias, with the view of obtaining a single National Pharmacopœia, which might avoid the risks and combine the advantages of the three.

Ten years afterwards the Medical Council was created; and one of its earliest objects was the construction and publication of a British Pharmacopœia. A second and improved Edition of this has been recently put forth, which appears to satisfy the wants, and to have obtained the approval, of the Profession.

For this Edition I have written a new 'Companion,' comparing it with the Pharmacopœias which had previously been used in Britain, and with the principal Continental Pharmacopœias, in the hope that some international spirit may be infused into future Editions, and that Preparations bearing the same name may be of the same strength in whatever country or language they may be prescribed.

Having received your permission to dedicate this my latest Volume to you, I rejoice in the opportunity thus afforded me of again expressing my profound respect and esteem for your character as a man and as a Physician,—sentiments which I feel persuaded I share in common with the members of the whole Medical Profession.

That you may long enjoy the dignified retirement you have so nobly earned, is the sincere wish and prayer of,

My dear Sir,

Your faithful Servant,

THE AUTHOR.

PREFACE.

The Pharmacopœia of 1864 had the merit of amalgamating the three Pharmacopœias of Britain, but it had defects, and the Medical Council ordered a new Edition to be prepared. A Committee was appointed of eminent men, with the President of the Council as Chairman. These gentlemen were engaged some years upon the work; and when completed it was submitted to all the members of the Medical Council, and to other practical men, for the purpose of receiving suggestions. The Author prepared, from the formulæ of this work, the preparations for the Paris Exhibition; it has therefore been well tested and corrected, and is worthy of the respect of the medical profession.

The Author has re-written his 'Companion' to correspond with this new Edition, and so arranged the matter as to render it easy for medical men in active practice to become acquainted with the changes and new introductions with as little expense of trouble and time as possible.

The "Non-Officinal" preparations are increased in number. Incompatibles, and antidotes to poisonous drugs, are added; and the Author has taken great pains to make this new work as worthy the notice of the Profession as the previous Editions have been.

277, Oxford Street,
July, 1867.

THE WHOLE OF THE FOLLOWING PREPARATIONS ARE CONTAINED IN THE BRITISH PHARMACOPŒIA, 1867.

Those marked NEW *are for the* first time *introduced in* 1867.
Those marked 1864 only *were new in the British Pharmacopœia*, 1864.
Those marked L., E., *or* D., *are those derived from the London, Edinburgh, and Dublin Pharmacopœias.*

A SEPARATE TABLE IS GIVEN, SHOWING THE CHANGES MADE IN THE PREPARATIONS OF THE LONDON, EDINBURGH, AND DUBLIN PHARMACOPŒIAS.

L. E. — Acetum Britannicum; British and Dublin, French Vinegar.
NEW. — Acidum Carbolicum, in crystals. Dose, 1 grain.
NEW. — „ Carbolici Glycerinum, 1 in 5. Dose, 5 minims.
NEW. — „ Gallici Glycerinum, 1 in 4½. Dose, 10 minims.
NEW. — „ Hydrocyanici Vapor, 10 to 15 minims for one inhalation.
L. — „ Nitricum, sp. g. 1·420. Brit. 1864, Edin. and Dub. much stronger, sp. g. 1·500.
L. alt[d]. 1864. — „ Phosphoric. Dil. 10 per cent. Lond. 8·7 per cent.
1864. — „ Sulphurosum. Dose, ½ to 1 drm.
NEW. — „ Tannici Glycerinum, 1 in 4½. Dose, 10 to 40 minims.
1864. — „ Tannici Suppositoria, 3 grs. each.
1864. — „ Tannici Trochisci, ½ gr. each. Dose, 1 to 6 loz.
1864. — Aconiti Tinctura, 1 in 8. ⅓ the strength of Lond.; ¼ that of Dub.
1864. — „ Linimentum, 1 in 1.
1864. — Aconitiæ Unguentum, 1 in 60.
NEW. — Adeps Benzoatus.
1864. — Aloes Barbadensis Pilula, 1 in 2. 50 per cent. stronger than Pil. Aloes c. Sapone, Lond.
E. alt[d]. — „ et Ferri Pilula, 1 in 5, with only ½ the Aloes of Edin.
Strgth. of E. — „ Socotrinæ Decoctum compositum (4 grs. in 1 oz.). Brit. 1864, 5·6 grs.; Lond. 3·3 grs.; Dub. 5 grs.
1864. — „ Socotrinæ Pilula 1 in 2; Lond. 1 in 3; Edin. 1 in 2½.
1864. — „ Socotrinæ et Assafœtidæ Pilula, 1 Aloes, 1 Assafœt. in 4.
E. 1864. — „ Socotrinæ Vinum, 1 in 26¾, Lond. 1 in 20. Dose, 1 to 2 drms.
L. E. — Ammoniæ Acetatis Liquor. ⅓ stronger than Dub. ½ the strength of Brit. 1864, which is now obsolete.
1864. — „ Benzoas. Dose, 10 to 20 grs.
L. — „ Citratis Liquor. Dose, 2 to 6 drms.
1864. — „ Phosphas. Dose, 5 to 20 grs.
L. E. D. — „ Spiritus Fœtidus. Dose, ½ to 1 drm.
NEW. — Ammonii Bromidum. Dose, 2 to 20 grs.
„ Chloridum. *Syn.* Ammoniæ Hydrochlor., Ammoniæ Murias.
1864. — Amygdalæ Pulvis compositum. *Syn.* Confectio, Lond.; Conserva, Edin.
NEW. — Amyli Glycerinum, 1 starch in 9. *Syn.* Plasma.

D. alt^{d}. Anisi Essentia, 1 oil in 5 ; Dub. 1 in 10.

1864. Antimonialis Pulvis. Dose, 2 to 6 grs.

1864. Arnicæ Tinctura, 1 in 20.
Weaker than the foreign Pharmacopœias.

Arsenici Hydrochlorici Liquor. Same strength as Liquor Arsenicalis.
3 times stronger than Lond. Liq. Arsenici Chloridi.

1864. Assafœtidæ Pilula composita, the representative of Pil. Galban. Co

„ Enema, 30 grs. Gum for one enema.
Brit. 1864 and others made with Tincture.

New. Atropiæ Sulphatis Liquor, 4 grs. to the oz.

1864. „ Unguentum. 1 in 64.

1864. Aurantii Floris Syrup. Dose, 1 to 2 drms.

1864. „ Infusum.

L. E. D. „ Infusum compositum.

New. „ Vinum, British Orange Wine.

1864. Beberiæ Sulphas. Dose, 1 to 3 grs.

1864. Belæ Extractum Liquidum.

New. Belladonnæ Emplastrum. Now with Rectified Spirit.
Double the strength of Lond.

1864. „ Tinctura, 1 in 20. Dose, 5 to 20 minims.
½ the strength of Lond. and Dub.

1864. „ Linimentum, 1 root in 1.

New. Bismuthi Carbonas. Dose, 5 to 20 grs.

New. „ Liquor et Ammoniæ Citratis. Dose, ½ to 1 drm.

1864. „ Trochisci, 2 grs. each.

New. Boracis Glycerinum, 1 in 4¾.

New. Cadmii Iodidum.

New. „ Iodidi Unguentum, 1 in 8.

Weak^{d}. 1864. Cajuputi Spiritus, 1 in 50.
Only ⅕ the strength of 1864.

1864. Calcis Liquor saccharatus. Dose, 15 to 60 minims.

1864. Calumbæ Extractum. Dose, 2 to 10 grs.
(Now watery extract.)

E. alt^{d}. 1864. „ Infusum, with cold water.
Twice the strength of Edin.

D. „ Tinctura, 1 in 8. Dose, ½ to 2 drms.
50 per cent. stronger than Lond. and Edin.

D. Camphoræ Liniment. comp. contains nearly twice the amount of ammonia of London.

1864. Cannabis Indicæ, Extract. Dose, ¼ to 1 gr.

1864. „ „ Tinctura. 5 to 20 minims.

L. Cantharidis Acetum. Stronger of Acid than Lond.
½ the strength of Canth. of Edin. and Dub.

New. „ Charta epispastica.

1864. Lin. Canth. „ Liquor epispasticus.

1864. Cardamomi Tinctura composita, 1 in 80.
50 per cent. stronger than Lond. Edin. and Dub.

1864. Catechu Trochisci, 1 gr. each. Dose, 1 to 3 loz.

New. Cerii Oxalas. Dose, 1 to 2 grs.

Charta Epispastica. *See* Cantharidis.

New. Chlori Vapor.

1864. Chloroformi Linimentum, equal parts Chloroform and Olive Oil.
1864. Chloroformi Spiritus, 1 Chloroform and 19 Spirit (1 in 20).
NEW. „ Tinctura composita, 1 in 10. Dose, 20 to 60 minims. 1 Chloroform, 4 Spirit, 5 Comp. Tinct. Cardamoms
1864. Cinchonæ Extractum liquidum, same as Lond. Infusum spissatum.
1864. Cocci Tinctura, 1 in 8; Dub. 1 in 10.
1864. Collodium.
NEW. „ Flexile.
L. 1864. Colocynthidis Extractum compositum. Dose, 2 to 5 grs.
E. D. 1864. „ Pilula compositum. Dose, 5 to 10 grs. Dub. contains only ⅓ the quantity of Scammony.
E. 1864. „ Pilula et Hyoscyami. Dose, 5 to 10 grs.
1864. With Ext. Conii Cataplasma, now with powder.
L. „ Pilula. Dose, 5 to 10 grs.
1864. „ Succus, 1 in 4. Dose, 30 to 60 minims.
NEW. „ Vapor, 2 grs. Extract in each inhalation.
1864. „ Tinctura, made with fruit, 1 in 8. Dose, ½ to 1 drm.
1864. Coriandri Oleum. Dose, 1 to 4 minims.
E. 1864. Creasoti Mistura. Dose, 1 to 2 oz.
NEW. „ Vapor, 12 minims for each inhalation.
1864. Cretæ Aromaticus Pulvis, similar ingredients to Conf. Aromatica.
1864. „ Aromaticus Pulvis c. Opio. Dose, 10 to 40 grs.
D. & 1864 alt^{d}. Crotonis Linimentum, 1 Croton, Cajeput 3½, Rect. Spirit 3½. Brit. 1864 1 Croton and 7 Oil; Dub. 1 Crot., 7 Oil of Turpentine.
1864. Cubebæ Oleum. Dose, 5 to 20 minims.
D. alt^{d}. „ Tinctura, 1 in 8. Dose, 1 to 2 drms. ½ the strength of Dub.
1864. Cusso Infusum, ¼ oz., Water 4 oz. for 1 dose.
E. & D. alt^{d}. 1864. Digitalis Infusum. Dose, ¼ to ½ oz. ½ the strength of Edin. and Dub.
1864. Dulcamaræ Infusum. Dose, 1 to 2 oz.
1864. Ergotæ Extractum liquidum. Dose, 15 to 30 minims.
D. 1864. „ Infusum. Dose, 1 to 2 oz.
D. 1864. „ Tinctura. Dose, 15 to 60 minims.
1864. Fel Bovinum purificatum. Dose, 3 to 6 grs.
D. Ferri Acetas Tinctura. Dose, 5 to 30 minims.
1864. „ Arsenias. Dose, $\frac{1}{16}$ gr.
E. 1864. „ Carbonatis Pilula. Dose, 5 to 20 grs.
1864. „ et Quiniæ Citras. Dose, 5 to 10 grs.
1864. „ Iodidi Pilula. Dose, 3 to 8 grs.
D. „ Mistura Aromatica. Dose, 1 to 2 oz.
1864. „ Perchloridi Liquor fortior.
NEW. „ Perchloridi Liquor, same strength as Tinctura.
D. 1864. „ Pernitratis Liquor. Dose, 10 to 40 minims.
„ Peroxidum Hydratum. *Syn.* Ferri Sesquioxidum.
1864. „ Phosphas. Dose, 5 to 10 grs.
1864. „ Phosphatis Syrupus. Dose, 1 to 4 drms.
D. 1864. „ Sulphas Granulata.
L. „ Vinum, made with Iron Wire and Sherry.
D. 1864. Ferrum Redactum. Dose, 1 to 5 grs. Ferri Pulvis, Dub.
NEW. „ Redactum Trochisci, 1 gr. in each loz.

1864. Filicis Extractum liquidum (Oil of Male Fern). Dose, ½ to 1 drm.
Galbani compos. Pilula. *See* Pil. Assafœtida.
D. 1864. Gallæ Unguentum, 1 in 6½.
L. D. Gentianæ Infusum compositum. Dose, 1 to 2 oz.
E. Name alt[d]. „ Mistura (same as Edin. Infus. comp.). Dose, ½ to 1 oz.
New. Glycerinum Acidi Carbolici, 1 in 4½.
New. „ Acidi Gallici, 1 in 4½.
New. „ Acidi Tannici, 1 in 4½.
New. „ Amyli, 1 in 8½.
New. „ Boracis, 1 in 4½.
L. 1864. Granati Radicis Corticis Decoctum, 1 in 10. Dose, 1 to 2 oz.
D. 1864. Hemidesmi Syrupus, 1 in 8. Dose, 1 to 4 drms.
New. Hydrargyri Suppositoria, 5 grs. ointment in each.
New. „ Unguentum compositum. (Scott's Ointment.)
D. alt[d]. „ Iodidi Rubri Unguentum, 1 in 28. Dub. 1 in 8.
„ Perchloridum, name for Corrosive Sublimate.
L. „ Perchloridum Liquor, 1 in 960. Dose, ½ to 2 drms.
New. „ Lotio flava, about 1⅝ gr. to 1 oz. Lime Water.
New. „ Lotio nigra, 3 grs. Calomel to 1 oz. Lime Water.
„ Subchloridum, name for Calomel.
1864. „ Subchloridum Unguentum, Calomel 1, Lard 5½.
„ Ammoniatum, name for White Precipitate.
1864 alt[d]. Iodi Linimentum, 1 of Iodine in 8. ½ the strength of 1864.
New. „ Liquor, 1 of Iodine in 24.
L. D. 1864. „ Tinctura, 1 of Iodine in 40. Edin. 1 in 17.
New. „ Vapor, Tinct. 1 drm. for each inhalation.
L. Ipecacuanhæ Pilula c. Scilla. Dose, 5 to 10 grs.
New. „ Trochisci, ¼ gr. in each loz. Dose, 1 to 3 loz.
1864. „ Trochisci et Morphiæ, $\frac{1}{36}$ gr. with $\frac{1}{12}$ gr. Ipecac.
L. alt[d]. 1864. Jalapæ Extractum, 5 to 15 grs.
1864. „ Resina. Dose, 2 to 5 grs.
1864 alt[d]. Juniperi Spiritus (1 Oil in 50). Dose, 30 to 60 minims. Brit. 1864, 1 in 10. L. E. and D., very weak.
1864. Kamala. Dose, 1 to 2 drms.
L. 1864. Kino Pulvis compositus. Brit. Pulv. Kino comp. c. Opio.
D. 1864. Krameriæ Tinctura, 1 in 8. Dose, 1 to 2 drms.
L. Lactucæ Extractum. Dose, 5 to 10 grs.
E. D. 1864. Laurocerasi Aqua. Dose, 5 to 30 minims.
1864 alt[d]. Lavandulæ Spiritus (1 of Oil in 50). Dose, ½ to 1 drm. Brit. 1864, 5 times stronger.
L. 1864. Lini Cataplasma.
1864. Lithiæ Carbonas. Dose, 3 to 6 grs.
1864. „ Citras. Dose, 5 to 10 grs.
New. „ Liquor effervescens. Dose, 10 oz., containing 5 grs.
L. 1864. Lupuli Tinctura (1 in 8). Dose, ½ to 2 drms. Edin. and Dub. with Lupuline.
New. Magnesiæ Carbonatis Liquor, 13 grs. in each oz. Dose, 1 to 2 oz.
E. D. 1864. „ Sulphatis Enema, 1 oz. in each.
D. 1864. Maticæ Infusum. Dose, 1 to 2 oz.
D. alt[d]. Menthæ Piperitæ Essentia, 1 in 5. Dose, 10 to 60 minims. Dub. 1 in 10.
1864 alt[d]. Menthæ Piperitæ Spiritus, 1 in 50. Dose, ½ to 1 drm. Brit. 1864, 5 times stronger.

	New.	Mezerei Corticis Extractum Etherium, contained in Lin. Sinap. comp.
		Misturæ Sennæ. *See* Senna.
L.	1864.	Mori Syrupus. Dose, 1 to 2 drms.
D.		Morphiæ Acetatis Liquor, ½ gr. in 1 drm. Dose, 10 to 60 minims. Lond. 1 gr. in 1 drm.
D.	1864.	„ Hydrochlor. Liquor, ½ gr. in 1 drm. Dose, 10 to 60 minims. Lond. 1 gr. in 1 drm.
	1864 alt$_d$.	„ Suppositoria, ½ gr. in each. Brit. 1864, ¼ gr. only in each.
E.	1864.	„ Trochisci, $\frac{1}{36}$ gr. in each.
E.	1864.	„ et Ipecac. Trochisci, $\frac{1}{12}$ gr. Ipecac. and $\frac{1}{36}$ gr. Morphia.
	1864 alt$_d$.	Myristicæ Spiritus (1 Oil in 50). Dose, ½ to 1 drm. Brit. 1864, 5 times stronger.
	1864.	Nucis Vomicæ Tinctura, 1 in 10. Dose, 10 to 30 minims.
	New.	Opii Confectio (1 powder in 40). Dose, 5 to 20 grs.
	1864.	„ Extractum liquidum (1 of Extract in 20). Dose, 10 to 30 minims.
		„ Pilula, 1864; now called Pilula Saponis comp. Dose, 3 to 6 grs.
	New.	„ Pulvis compositus. Dose, 2 to 5 grs.
E.		„ Tinctura Ammoniati. The Scotch Paregoric. Dose, ½ to 1 drm.
E.	1864.	„ Trochisci, $\frac{1}{10}$ gr. each. Dose, 1 or 2 loz.
L. E.		„ Vinum, with aromatics. Dose, 10 to 40 minims. Brit. 1864, and Dub., without aromatics. ¼ stronger than E.; ⅛ stronger than Br. 1864 and D.; ⅕ weaker than L.
L. E.		Papaveris Extractum. Dose, 2 to 5 grs.
L. E.		Pareiræ Extractum. Dose, 10 to 20 grs.
	1864.	„ Extractum liquidum. Dose, ½ to 2 drms.
	New.	Physostigmatis Extractum, $\frac{1}{10}$ to ¼ gr.
L. E. D.		Picis Unguentum.
E. and D.	alt^d.	Plumbi Acetatis Unguent. (1 in 37½). Edin. 1 in 21; Dub. 1 in 17.
E.	1864.	„ Pilula cum Opio, 3 grs. Lead, ½ gr. Opium, in a 4 gr. pill.
	New.	„ Suppositoria composita. 3 grs. in each.
	New.	„ Iodidi Emplastrum.
L.	D.	„ Iodidi Unguentum (1 in 8).
	1864.	Podophylli Resina. Dose, $\frac{1}{6}$ to 1 gr.
	1864.	Potassii Bromidum. Dose, 15 to 40 grs.
	New.	„ Iodidi Linimentum c. Sapone,
L.	D.	„ Iodidi Unguentum. Carbonate of Potash is now introduced to prevent its turning yellow.
	New.	Potassæ Sulphuratæ Unguentum, 1 in 15½, soon goes bad.
E.		„ Liquor effervescens. Edin. Aq. Potassæ effervescens.
	New.	„ Chloratis Trochisci, 5 grs. each loz. Dose, 1 to 6 loz.
	1864.	„ Citras. Dose, 20 to 60 grs.
	1864.	„ Permanganatis Liquor (1 in 120). Dose, 2 to 4 drms.
	New.	„ Pyrethri Tinctura (1 in 5). Used chiefly for toothache.
E.		Quassiæ Tinctura. Dose, 1 to 2 drms.
	New.	Quiniæ Pilula (1 in 1⅓). Dose, 2 to 10 grains.
	New.	„ Vinum. Dose, ½ to 1 oz.
L. E.		Rhamni Syrupus. Dose, 1 drm.
	New.	Rhei Syrupus. Dose, 1 to 4 drms.
D.		„ Vinum (1 in 14). Dose, 1 to 2 drms. Edin. nearly twice the strength.

	1864 alt^{d}.	Rosmarini Spiritus (1 Oil in 50). Brit. 1864, 5 times stronger.
	1864.	Sabinæ Tinctura (1 in 8). Dose, 15 to 60 minims.
L.		Saponis Emplastrum Cerati. Same as Ceratum Saponis comp. Lond.
L. E. D.		„ Pilula composita, 1 gr. Opium Powder in 5. Edin. and Brit. 1864, Pil. Opii.
L.	D. 1864.	Scammonii Confectio (1 in 3). Dose, 10 to 30 grs.
E.	1864.	„ Mistura. 4 grs. in 2 oz. Milk for a dose.
	1864.	„ Pulvis comp., 1 in 2. Dose, 10 to 20 grs.
	1864.	„ Resina. Dose, 4 to 8 grs.
L. E. D.		Scillæ Acetum. Dose, 15 to 40 minims.
L.		„ Oxymel. Dose, ½ to 1 drm.
E. D.		„ Syrupus. Dose, ½ to 1 drm.
	1864.	Scoparii Succus. Dose, 1 to 2 drms.
	1864.	Senegæ Tinctura (1 in 8). Dose, ½ to 2 drms.
L.	1864.	Sennæ Infus. Dose, 1 to 2 oz. Edin. ¾ strength; Dub. ½ strength.
	New.	„ Mistura composita. Dose, 1 to 1½ oz.
	1864.	„ Syrupus (1 in 2). Dose, 1 to 2 drms.
L. E. D.		„ Tinctura, 1 in 8. Lond. 1 in 11; E. and D. 1 in 10.
L.	1864.	Sinapis Cataplasma.
	New.	„ Linimentum compositum (1 Essential Oil in 40).
	New.	„ Oleum.
	1864.	Sodæ Arsenias. Dose, $\frac{1}{16}$ to $\frac{1}{8}$ grain.
	1864.	„ Arseniatis Liquor, ½ gr. in 1 drm. Dose, 2 to 5 minims.
E.		„ Liquor effervescens. *Syn.* Soda Water. Edin. Aqua Sodæ effervescens.
	New.	„ Citro-Tartras effervescens. *Syn.* Granular Citro-Tartrate of Soda. Dose, 1 to 2 drms.
L.		Sp. Vini Gallici Mistura. Dose, ½ to 1½ oz.
	1864.	Strychniæ Liquor, ½ gr. in 1 drm. Dose, 4 to 10 minims.
	D. 1864.	Sulphuris Confectio (1 in 2¼). Dose, 1 to 2 drms.
L.		„ Iodidi Unguentum (1 in 16).
	New.	Sumbul Tinctura (1 in 8). Dose, 15 to 30 minims.
L. E. D.		Tabaci Enema (20 grs. in each Enema).
	1864.	Taraxaci Succus (1 juice in 3). Dose, 2 to 4 drms.
	D. 1864.	Terebinthinæ Confectio (1 in 4). Dose, 1 to 4 drms.
L.		„ Linimentum (1 in 1½). About double the strength of 1864.
	1864.	„ Linimentum Aceticum. Sir John Long's Liniment.
	1864.	„ Unguentum (1 in 2⅛).
	New.	Theobromæ Oleum.
E. alt^{d}.	1864.	Tragacanthæ Mucilago (1 in 80). Edin. 1 in 36, Brit. 1864, 1 in 48
L.		Ulmi Decoctum (1 in 8). Dose, 4 to 6 oz.
	1864.	Uvæ Ursi Infusum (1 in 20). Dose, 1 to 2 oz.
	1864.	Veratriæ Unguentum (1 in 60).
	New.	Veratri Viridis Tinctura (1 in 8). Dose, 5 to 20 minims.

THE BRITISH PHARMACOPŒIA

HAS THUS ALTERED THE FOLLOWING PREPARATIONS,

WHICH WERE IN THE

LONDON PHARMACOPŒIA.

Strengthened.

Acetum Cantharidis, in Acid merely.
Acid. Phosphor. Dil., increased from 8·7 to 10 per cent.
Decoctum Aloes comp., from 3 3 to 4 grs. to the oz.
Emplastrum Belladonnæ, doubled in strength.
Liq. Arsenici Hydrochloricus, trebled in strength.
Liq. Camphor. comp., Ammonia doubled.
Tinct. Calumbæ, 50 per cent.
„ Cardam. comp., 50 per cent.
Spir. Juniperi, made 1 Oil in 50.
„ Menth. Pip., made 1 Oil in 50.
„ Myristicæ, made 1 Oil in 50.
„ Rosmarini, made 1 Oil in 50.

Weakened.

Liq. Morph. Acet., to ½ strength.
„ „ Hydrochlor., to ½ strength.
Tinct. Aconiti, to ⅓ strength.
„ Belladonnæ, to ½ strength.
Vini Aloes, to ⅘ strength.
„ Opii, to ⅘ strength.

(Confectio Aromatica, in powder, now called Pulv. Cretæ Aromaticus.)

EDINBURGH.

Strengthened.

Infus. Calumb., doubled.
„ Sennæ, by ⅓.
Spir. Camphoræ, doubled.
„ Junip., made 1 Oil in 50.
„ Lavand., „ „
„ Menth. Pip., „ „
„ Myristicæ, „ „
„ Rosmarini, „ „
Tinct. Calumbæ, 50 per cent.
„ Cardam. comp., 50 per cent.
Vin. Opii, by ¼.

Weakened.

Acetum Cantharidis, to ½ nearly.
Infus. Digitalis, to ½.
Mist. Tragacanthæ, to ½.
Pil. Aloes et Ferri, to ½ the quantity of Aloes.
Tinct. Iodi, to ½.
Ung. Plumbi Acetat., nearly ½.

(Conserv. Amygdal., now Pulv. Amygd. comp.)
(Infus. Gentianæ comp., now Mistura.

DUBLIN.

Strengthened.

Essentia Anisi, doubled.
„ Menth. Pip., doubled.
Infus. Sennæ, doubled.
Liq. Ammon. Acet., by ⅓.
Pil. Coloc. comp., Scammony doubled.
Tinct. Cardam. comp., 50 per cent.
Vin. Opii, by ¼.

Weakened.

Acet. Cantharidis, to ½.
Acidum Nitricum, sp. g. to 1·420.
Decoct. Aloes comp., to ⅘.
Infus. Digitalis, to ½.
Tinct. Aconiti, to ¼.
„ Belladonnæ, to ½.
„ Cubebæ, to ½.
Ung. Hydr. Iodidi Rub., to ¼ nearly.
„ Plumbi Acetat., to ½.

EQUIVALENTS OF ENGLISH WEIGHTS TO FRENCH GRAMMES.

1 pound avoirdupois	7000 Troy grains ...	or	16 ounces ...	=	453·592	French grammes.
	6562·5	or	15	=	425·241	,, ,,
	6125	or	14	=	396·892	,, ,,
	5687·5	or	13	=	368·543	,, ,,
	5250	or	12	=	340·194	,, ,,
	4812	or	11	=	311·844	,, ,,
	4375	or	10	=	283·495	,, ,,
	3937·5	or	9	=	255·145	,, ,,
	3500	or	8	=	226·796	,, ,,
	3062	or	7	=	198·446	,, ,,
	2625	or	6	=	170·097	,, ,,
	2187·5	or	5	=	141·747	,, ,,
	1750	or	4	=	113·398	,, ,,
	1312·5	or	3	=	85·048	,, ,,
	875	or	2	=	56·699	,, ,,
1 ounce,	437·5	or	1	=	28·349	,, ,,
	218·75	or	½	=	14·174	,, ,,
	109·25	or	¼	=	7·087	,, ,,
	15·43			=	1	
	1·543			=	·1, a décigramme.	
1 grain,	1			=	·0648	
	·15 or $\frac{1}{7}$ nearly			=	·01, a centigramme.	
	·015 or $\frac{1}{70}$ nearly			=	·001, a milligramme.	

EQUIVALENTS OF FRENCH GRAMMES TO ENGLISH WEIGHTS.

1 kilogramme,	1000 French grammes	=	35 ounces and 100 grains.	
	900	=	31 ..... and 308¾	,,
	800	=	28 ..... and 80	,,
	700	=	24 ..... and 288¾	,,
	600	=	21 ..... and 60	,,
	500	=	17 ..... and 268¾	,,
	400	=	14 ..... and 40	,,
	300	=	10 ..... and 248¾	,,
	200	=	7 ..... and 20	,,
1 hectogramme,	100	=	3 ..... and 228¾	,,
	90	=	3 ..... and 75	,,
	80	=	2 ..... and 358	,,
	70	=	2 ..... and 203¾	,,
	60	=	2 ..... and 50	,,
	50	=	1 ..... and 333	,,
	40	=	1 ..... and 178¾	,,
	30	=	1 ..... and 25	,,
	20	=	 308	,,
1 décagramme,	10	=	..... 154¼	,,
	5	=	 77	,,
1 gramme,	1	=	..... 15½	,, nearly.
	·5	=	..... 7¾	,, ,,
1 décigramme,	·1	=	..... 1½	,, ,,
	·05	=	..... ¾	,, ,,
1 centigramme,	·01	=	..... ⅐	,, ,,
	·005	=	..... 1/14	,, ,,
1 milligramme,	·001	=	..... 1/70	,, ,,

BEAUMÉ'S HYDROMETER COMPARED WITH THE SPECIFIC GRAVITY OF LIQUIDS HEAVIER THAN WATER.

1·000 BEING TAKEN AS THE SPECIFIC GRAVITY OF DISTILLED WATER AT 60° F.

Beaumé.	Sp. G.	Beaumé.	Sp. G.
0	1·000	39	1·372
1	1·007	40	1·384
2	1·014	41	1·398
3	1·022	42	1·412
4	1·029	43	1·426
5	1·036	44	1·440
6	1·044	45	1·454
7	1·052	46	1·470
8	1·060	47	1·485
9	1·067	48	1·501
10	1·075	49	1·516
11	1·083	50	1·532
12	1·091	51	1·549
13	1·100	52	1·566
14	1·108	53	1·583
15	1·116	54	1·601
16	1·125	55	1·618
17	1·134	56	1·637
18	1·143	57	1·656
19	1·152	58	1·676
20	1·161	59	1·695
21	1·171	60	1·715
22	1·180	61	1·736
23	1·190	62	1·758
24	1·199	63	1·779
25	1·210	64	1·801
26	1·221	65	1·823
27	1·231	66	1·847
28	1·242	67	1·872
29	1·252	68	1·897
30	1·261	69	1·921
31	1·275	70	1·946
32	1·286	71	1·974
33	1·298	72	2·000
34	1·309	73	2·031
35	1·321	74	2·059
36	1·334	75	2·087
37	1·346	76	2·116
38	1·359		

TABLE COMPARING THE PHARMACEUTICAL HYDROMETER WITH BEAUMÉ'S FOR SPIRIT,

INDICATING AT THE SAME TIME THE SPECIFIC GRAVITY AND PERCENTAGE OF ALCOHOL AT A TEMPERATURE OF 15° CENTIGRADE=NEARLY 60° FAHRENHEIT.

Pharmaceutical.	Beaumé's.	Specific Gravity.	Percentage of Alcohol.
0	10	1·0000	0·
1	11	0·9935	4·6
2	12	0·9863	10·1
3	13	0·9796	16·3
4	14	0·9730	23·0
5	15	0·9669	29·0
6	16	0·9600	34·4
7	17	0·9530	38·5
8	18	0·9473	43·2
9	19	0·9412	47·3
10	20	0·9350	49·7
11	21	0·9290	52·7
12	22	0·9231	55·6
13	23	0·9172	58·5
14	24	0·9114	61·0
15	25	0·9057	63·6
16	26	0·9000	66·0
17	27	0·8944	68·4
18	28	0·8889	70·6
19	29	0·8834	72·7
20	30	0·8781	74·8
21	31	0·8727	76·8
22	32	0·8675	78·9
23	33	0·8623	80·7
24	34	0·8571	82·5
25	35	0·8521	84·3
26	36	0·8471	86·0
27	37	0·8421	87·5
28	38	0·8372	89·1
29	39	0·8324	90·5
30	40	0·8276	92·0
31	41	0·8229	93·3
32	42	0·8182	94·5
33	43	0·8136	95·7
34	44	0·8090	96·8
35	45	0·8045	98·1
36	46	0·8000	98·8
37	47	0·7956	99·8
38	48	0·7912	
39	49	0·7868	
40	50	0·7826	
41	51	0·7783	
42	52	0·7742	
43	53	0·7700	
44	54	0·7659	
45	55	0·7619	
46	56	0·7579	
47	57	0·7539	
48	58	0·7499	
49	59	0·7461	
50	60	0·7422	
51	61	0·7384	

TABLE OF COMPARISON OF THE FAHRENHEIT WITH THE CENTIGRADE THERMOMETER.

1° Fahrenheit = ·555° Centigrade.
1° Centigrade = 1·8° Fahrenheit.

	Fahrenheit.	Centigrade.	
A Mixture of Salt and Ice	0°	−17·78°	
	5	−15·00	
	10	−12·22	
	15	−9·44	
	20	−6·67	
	25	−3·88	
	30	−1·11	
	32	0·00	Freezing Point.
	35	1·67	
Greatest Density of Water	39·2	4·00	
	40	4·44	
	45	7·21	
	50	10·00	
	55	12·77	
	60	15·56	
	62	16·67	
	65	18·33	
	70	21·11	
	75	23·88	
	80	26·67	
	85	29·44	
	90	32·22	
	95	34·99	
Blood Heat	98	36·67	
	100	37·78	
	105	40·55	
	110	43·33	
	115	46·10	
	120	48·89	
	125	51·66	
	130	54·44	
	135	57·21	
	140	60·00	
	145	62·77	
	150	65·55	
	155	68·32	
	160	71·11	
	165	73·88	
	170	76·66	
	175	79·43	
	180	82·22	
	185	84·99	
	190	87·77	
	195	90·54	
	200	93·33	
	205	96·10	
	210	98·88	
	212	100·00	Boiling Point of Water.

It is almost unnecessary to explain the few Abbreviations used in this Work. In the comparison of the various Pharmacopœias, the abbreviations Austr. Belg. Fr. Pr. and U.S. refer to the Pharmacopœias of Austria, Belgium, France, Prussia, and the United States. In the Measures, C. means Congium, O. Octarium.

THE WEIGHTS AND MEASURES OF THE BRITISH PHARMACOPŒIA, AT THE TEMPERATURE OF 60° FAHRENHEIT.

Weights.

The Avoirdupois pound = 16 oz. = 7000 grs.
1 oz. = 437·5 grs.
1 gr. = 1 gr.

Measures.

C	1 gallon	= 8 pints,	weighing 10 pounds,	contains	76,800 minims.
O	1 pint	= 20 fluid ounces	„ 1¼ „	„	9600 „
fl. oz.	1 fluid ounce	= 8 fluid drachms	„ 437·5 grains	„	480 „
fl. dr.	1 fluid drachm	= 60 minims	„ 54·68 „	„	60 „
♏	1 minim		„ ·91 „	„	1 „

35 fluid ounces are contained in the French Litre.

In the American Pharmacopœia the Troy ounce of 480 grains is adopted; but the pound, drachm, and scruple are not used. The measures have the same names as the British, but are different in value, the pint weighing 16 oz. 291·2 grains avoirdupois and the fluid ounce 455·7 grs. In the formulæ, the Acids and Oils are ordered by weight, other liquids by measure. In other foreign countries all medicines are weighed, and the gramme is becoming universally adopted.

The Prussian Pharmacopœia is mostly used in Germany and Russia; the French in Switzerland; that of Orosi in Italy.

Graduated measures require testing before use, which is easily done with good weights and scales, and distilled water. Every fluid ounce ought to weigh an ounce but there are two lines on the surface of a liquid; the upper one is that of capillary attraction to the sides of the vessel; the lower one the exact surface of the fluid. This should be on a line with the eye to measure accurately.

Specific Gravity of Syrups, etc., may be tested with a ten-ounce measure. Ten measured ounces of simple syrup should weigh nearly thirteen ounces and one-third representing the sp. gr. 1·330.

In the formula for the Syrups of the British Pharmacopœia they are directed to be made to a given weight, and the specific gravity is also stated. It can be easily ascertained what any of these weights would measure, by dividing the weight by the specific gravity; thus Syrupus Scillæ is directed to weigh 50 oz., and the specific gravity to be 1·330, then 1·330)50·000(37·5 or 37½ ounces by measure.

MATERIA MEDICA

WITH

COMPOUNDS AND PREPARATIONS.

ACACIÆ GUMMI.

WHITE TURKEY GUM ARABIC.

A gummy exudation from the stem of one or more undetermined species of Acacia, collected chiefly in Cordofan in Eastern Africa, and imported from Alexandria.

Contains about 17 per cent. of water.

Solubility in water, 1 in 1. Insoluble in Alcohol, Ether, and Oils.

Test.—Powder of gum should be white and free from Starch, and therefore, after boiling in water and cooling, should not be rendered blue by an aqueous solution of Iodine.

Medicinal Properties.

Emollient, nutritive. Allowed to dissolve slowly in the mouth allays tickling cough. For a demulcent drink, 1 of Mucilage, 1 of Syrup, and 20 of Water, are the best proportions.

Dose.—Ad libitum.

Preparation.

MUCILAGO.

Gum, 40; distilled water, 60: dissolve without heat. =(1 and $1\frac{1}{2}$).

The product measures only 87, therefore 4 of Gum are contained in $8\frac{3}{4}$ measures of Mucilage. Sp. g. 1·170.

(Same as British 1864, and Dub.; rather stronger than Edin.; Lond. Mistura Acaciæ, 1 and 2; Fr. 1 and 1; Austr. 1 and 2; Pr. 1 and 3; Belg. 1 and 4—also M. Spissa 1 and 2—and M. Levis, 1 and 9; U. S. about 1 and 2.)

Dose.—1 to 4 drms.

INCOMPATIBLES.—Alcohol, Ether, Ammonia, Acetate of Lead, Mineral Acids, Borax.

It is much used in cough linctuses and lozenges, and frequently to render oils, etc., emulsive with aqueous fluids; 3 drms. are required for 1 oz. of oils or resinous tinctures, 10 drms. for 1 oz. of copaiba. The mucilage should be put into a mortar and the oil added by degrees, with constant trituration. Used to keep Bismuth and other powders suspended, but Tragacanth answers better. It is sometimes used to make powders into pills, but they become hard after being kept a short time, therefore castor oil, glycerine, treacle, etc., are to be preferred. Mucilage, if kept only a week in hot weather, becomes sour, and its emulsive property is impaired: if made with hot water the change is more rapid. It is impossible to make a nice emulsion with some of the oils (the oil of Male Fern for instance) unless the Mucilage be quite fresh.

If fresh mucilage is not at hand, half the quantity of the powder of Acacia can be used. First rub the powder with the oil, then add water equal to double the weight of the powder, and rub till an emulsion is formed; now add by degrees any quantity of aqueous liquid ordered in the formula.

ACETUM.

BRITISH VINEGAR.

An acid liquid of a brown colour and peculiar odour, prepared from Malt and unmalted grain by the acetous fermentation; contains 4·6 per cent. anhydrous Acid.

(Same as Lond. and Edin., but British 1864, Dub. Belg. Fr. Pr. and U.S. are without Sulphuric Acid; not in Austr.)

Test.—Sp. g. 1·017 to 1·019. Ten minims of the Solution of Chloride of Barium (1 in 8) will precipitate all the Sulphuric Acid in an ounce of Vinegar, equal to $\frac{1}{1000}$ part which by law is allowed to be added to it. 554 grains by weight require at least 500 grain-measures of Volumetric Solution of Soda for neutralization, corresponding to 4·6 per cent. of anhydrous Acetic Acid. Sulphuretted Hydrogen causes no change in colour, indicating absence of metals.

Medicinal Properties.

Given to diminish profuse sweating in hectic cases. With sage it forms an astringent gargle. Used externally in lotions and fomentations. Used also to sponge the surface of the skin to allay heat, or with lint as a cooling discutient to bruises and sprains. The most ready and safe antidote in cases of poisoning by alkalies.

Dose.—1 to 3 drms., diluted.

INCOMPATIBLES.—Ammonia, Lime, all the alkalies and carbonates.

Used in making Empl. Cerat. Saponis.

ACETUM CANTHARIDIS.—*Vide* CANTHARIS, page 65.

ACETUM SCILLÆ.—*Vide* SCILLA, page 221.

ACIDUM ACETICUM.

In former Pharmacopœias there were ten degrees of strength ordered of ACIDUM ACETICUM. *The British Pharmacopœia now orders only three :—*

ACIDUM ACETICUM . . .	sp. g. 1·044,	cont. 28 per cent.	{ 8 times stronger than the Diluted.
ACIDUM ACETICUM DILUTUM	„ 1·006,	„ 3·5 „	
ACIDUM ACETICUM GLACIALE	„ 1·065,	„ 85 „	{ 3 times stronger than the Acidum Aceticum

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ACIDUM ACETICUM.

ACETIC ACID. PURIFIED PYROLIGNEOUS ACID.

An acid liquid prepared from wood by destructive distillation and subsequent purification, containing 28 per cent. of anhydrous acid, or 33 per cent of glacial Acid.

(Same as British 1864, and Dub.; Lond. 30·8; Edin. 21; U.S. 30·6; Pr. Acid. Acet. Dilut. 29; Austr. 25 per cent.; Fr. Acide Acétique du bois not in Belg.)

Test.—Sp. g. 1·044. 3 fluid drachms (182 grains by weight) require for neutralization 1000 grain-measures of the volumetric solution of Soda.

leaves no residue when evaporated; gives no precipitate with Sulphuretted Hydrogen, Chloride of Barium, or Nitrate of Silver. If a fluid drachm mixed with half an ounce of distilled water and half a drachm of pure Hydrochloric Acid be put into a small flask with a few pieces of Granulated Zinc, and while the effervescence continues, a slip of bibulous paper wetted with Solution of Subacetate of Lead be suspended in the upper part of the flask above the liquid, for about five minutes, the paper will not become discoloured—indicating absence of metals, Sulphuric Acid, Hydrochloric Acid, and Sulphurous Acid.

Equal volumes of this acid and water mixed, are of the same neutralizing power as the diluted mineral acids.

Used only in the preparation of other medicines, and contained in Acetum Cantharidis, Acidum Aceticum Dilutum, Extractum Colchici Aceticum, Linimentum Terebinthinæ Aceticum, Liquor Ammoniæ Acetatis, Liquor Epispasticus, and Oxymel.

ACIDUM ACETICUM DILUTUM.

DILUTED ACETIC ACID.

Of the strength of distilled vinegar. Contains 3·6 per cent. of anhydrous Acid.

Acidum Aceticum, 1; distilled water, 7: mix.

Test.—Sp. g. 1·006. 3 fluid ounces require for neutralization 930 grain-measures of volumetric solution of Soda.

(Same as Brit. 1864, and Dub.; Lond. 4·6; Edin. 3; Austr. and Pr. 4; Belg. 5·5 per cent.; Fr. distilled from Wine Vinegar.)

Medicinal Properties.

Used for the same purposes as common vinegar.

Dose.—1 to 3 drms. with water.

Used to prepare Acetum Scillæ.

ACIDUM ACETICUM GLACIALE.

GLACIAL ACETIC ACID.

Monohydrated Acetic Acid, $HO,C_4H_3O_3$, eq. 60, containing 84 per cent. of anhydrous Acid. The anhydrous Acid is represented thus, $C_4H_3O_3$, or $C_4H_6O_3$.

(Same as Brit. 1864, and Dub.; Acidum Aceticum, Edin. and Pr.; Acide Acétique Crystallisable, Fr.; A. A. Concentratissimum, Austr.; A. A. Concentratum, Belg.; not in U. S.)

Test.—Sp. g. 1·065, which is increased by adding 10 per cent. of water if the acid be of full strength. 1 fluid drachm (60 grains by weight) in an ounce of water require for neutralization 990 grain-measures of the volumetric solution of Soda. It does not give rise to a blue colour when added gradually to an equal volume of the solution of Iodate of Potash previously mixed with a little mucilage of Starch, or the test mentioned in Acetic Acid, which see,—indicating absence of Sulphurous Acid.

It is more than three times stronger than Acidum Aceticum, and twenty-

four times stronger than Acidum Aceticum Dilutum. It is a colourless liquid, with pungent acetous odour, is converted into a mass of crystals when cooled to 34° F. and remains so at 48°.

Medicinal Properties.

Escharotic; used for corns, and warts especially when of a syphilitic character; it speedily vesicates, and thus is useful in cases where Cantharides may do harm by being absorbed, but it causes much pain, and, if applied incautiously, may produce a most troublesome sore.

It is an ingredient in Mistura Creasoti and Acetum Cantharidis.

Not Officinal.

ACIDUM ACETICUM AROMATICUM, Belg. and Pr.—Glacial Acetic Acid, 72; Oil of Cloves, 9; do. Lavender, 6; do. Orange, 6; do. Bergamot, 3; do. Thyme, 3; do. Cinnamon, 1; mix and filter.

VINAIGRE DE QUATRE VOLEURS (Fr.).—Tops of the Greater and Lesser Wormwood, Rosemary, Sage, Peppermint, Rue, Lavender Flowers, of each 8; Calamus Root, Cinnamon, Cloves, Nutmeg, Garlic, of each 1; Camphor, 2; Glacial Acetic Acid, 8; Strong Vinegar, 500: dissolve the Camphor in the Glacial Acid; macerate the other ingredients in the Vinegar for fifteen days; press and mix.

ACIDUM ARSENIOSUM.

ARSENIOUS ACID. WHITE ARSENIC.

Teroxide of Arsenic, AsO_3; eq. 99, or As_2O_3 eq. 198.

An anhydrous Acid. A heavy white powder, or in stratified opaque masses.

Solubility in cold water, 1 in 100; in boiling water, 1 in 20.

Test.—Entirely volatilized by heat; sublimes entirely in octahedral crystals. 4 grains of it, dissolved in boiling water with 8 grains of Bicarbonate of Soda, discharge the colour of 808 grain-measures of the volumetric solution of Iodine. The Arsenite of Soda is converted into Arseniate, and the Iodine into Iodide of Sodium.

ANTIDOTES.—In case of poisoning by Arsenic, the antidotes are, moist Peroxide of Iron, Ammonia, artificial respiration, cold affusion.

Medicinal Properties.

Given in chronic cutaneous diseases and in chronic rheumatism of the joints; it is an antiperiodic in agues and neuralgic affections. Best given immediately after meals. Externally as a powerful caustic, and requires great care, as there is danger of absorption.

Dose.—$\frac{1}{60}$ to $\frac{1}{12}$ of a grain, in solution; rarely prescribed in the solid form.

Preparations.

LIQUOR ARSENICALIS (Fowleri). *Syn.* LIQ. POTASSÆ ARSENITIS. Sp. g. 1·009.

Arsenious Acid, 80 grs.; Carbonate of Potash, 80 grs.; Compound Tincture of Lavender, 5 fl. drms.; distilled water, 20 oz.: boil till dissolved, add the tincture, and make up with water to 20 oz. =(1 of Arsenic in 120).

(Is of the same strength in all the Pharmacopœias,—4 grs. of Arsenic to the ounce; half a grain in 30 minims; except Fr., which has half a grain in 50 minims.)

Dose.—2 to 8 minims twice a day in water with meals.

LIQUOR ARSENICI HYDROCHLORICUS.

Arsenious Acid, 80 grs.; Hydrochloric Acid, 2 drms.; distilled water, 20 oz.: boil the two acids with 4 oz. of the water until a solution is effected, then add sufficient distilled water to make up 20 oz.

Nearly three times stronger than Lond. =(1 of Arsenic in 120).

Dose.—2 to 8 minims.

INCOMPATIBLES.—Salts of Iron, Magnesia, Lime Water, and astringent matters.

ARSENIAS FERRI.—*Dose*, $\frac{1}{10}$ gr. *See* FERRI ARSENIAS, page 107.

ARSENIAS SODÆ.—*See* SODÆ ARSENIAS, page 229.

ARSENIATIS SODÆ LIQUOR. 1 in 120. *Dose*, 2 to 8 minims. } *See* SODÆ ARSENIATIS LIQUOR, page 229.

Not Officinal.

LIQUOR AMMONIÆ ARSENITIS was preferred by the late Mr. Gaskoin, and made of the same strength as Liquor Arsenicalis; Carbonate of Ammonia being substituted for Carbonate of Potash.

THE SOLUTIO SOLVENTIS MINERALIS of Dr. De Valangin (the Liquor Arsenici Chloridi of the London Pharmacopœia) contains 30 grains of Arsenic dissolved by 90 minims of Hydrochloric Acid in 20 ounces of Water; is about one-third of the strength of the above. *Dose.*—3 minims three times a day, increasing to 10 minims for chorea.

DONOVAN'S SOLUTION (the Liquor Arsenici et Hydrargyri Hydriodatis of the Dublin Pharmacopœia). A fluid drachm contains $\frac{1}{12}$th of a grain of Arsenic, $\frac{1}{4}$th of a grain of Mercury, $\frac{3}{4}$ths of a grain of Iodine. *Dose.*—10 to 30 minims.

ARSENICAL PASTE for Dentists.—Arsenious Acid, 2; Sulphate of Morphia, 1; Creasote to make a stiff paste. A quantity of the size of a pin's head is ample for one application. It should be spread on cotton-wool and placed in the tooth. It will thus destroy the sensibility of a carious tooth, and in a few minutes the tooth is ready for stopping.

ARSENICAL CAUSTIC POWDERS contain from $\frac{1}{16}$ to $\frac{1}{8}$ of Arsenious Acid to 1 of Calomel, Vermilion, or Sulphuret of Antimony, or of any combination of them.

IODIDE OF ARSENIC, given in Lepra. *Dose.*—$\frac{1}{30}$ of a grain in pill.

ACIDUM BENZOICUM.

BENZOIC ACID.

$HO,C_{14}H_5O_3$, or $H,C_7H_5O_2$, eq. 122.

In white crystalline silky plates obtained from Benzoin by sublimation.

Solubility in water, 1 in 300; in boiling water, 1 in 12; in spirit, 1 in 4. Soluble also in caustic alkalies and Lime. Borax adds much to its solubility in water; 1 of Borax and 1 of acid are soluble in 100 water.

Test.—When heated, it sublimes without residue.

Medicinal Properties.

Stimulant, expectorant; said to cure nocturnal incontinence of urine.

Dose.—5 to 15 grs. in a large quantity of water, or in pills made with Glycerine; 5 grs. acid and 1 min. Glycerine makes a good pill.

Contained in Ammon. Benzoas, in Tinct. Camphoræ Composita, 2 grs. in each ounce, and in Tinct. Opii Ammoniata, 9 grains in each ounce.

See BENZOINUM, page 50.

ACIDUM CARBOLICUM.

CARBOLIC ACID.

Syn. PHENIC ACID.

$HO, C_{12}H_5O$, or H, C_6H_5O, eq. 94.

In colourless acicular crystals, obtained from Coal Tar by fractional distillation (boiling-point 370°) and subsequent purification. Sp. g. 1·065. Melts at 95° F., to an oily liquid, having a strong tarry odour, but not disagreeable taste; resembles creasote in some of its properties.

Solubility in water, 1 in 33; more soluble in Ether, Alcohol, and Glycerine, fixed and Volatile Oils; does not redden litmus. It coagulates albumen.

(Fr. Acide Phénique; not in others.)

Dose of the Crystals.—1 grain in water.

Medicinal Properties.

Given to check sickness, to arrest diarrhœa, to remove intestinal worms; useful in some stages of phthisis. Used as a gargle (2 grs. to 1 oz.) for sore-throat attended with fœtor of breath; as an injection (1 gr. to 4 oz. of water) for the vagina or the bladder, to correct putrescence. Externally alone is a powerful caustic; as a lotion (15 to 20 grs. to the 1 oz.) for foul ulcers, carbuncles, scabies, and lepra; or an ointment (30 grs. to 1 oz. of Benzoated Lard).

Preparation.

GLYCERINUM ACIDI CARBOLICI.

Carbolic Acid, 1; Glycerine, 4: rub together till dissolved.

(By weight 1 in 6, by measure 1 in $4\frac{3}{4}$).

Dose.—5 to 10 minims in water.

Carefully applied to the tonsils when there is diseased state of mucous surface producing fœtor of breath; diluted, if necessary.

A new preparation.

ACIDUM CITRICUM.

CITRIC ACID.

$3HO, C_{12}H_5O_{11} + 2HO$, or $H_3C_6H_5O_7H_2O$, eq. 210.

A crystalline acid obtained from Lemon Juice or from the juice of the fruit of *Citrus Limetta*, the Lime.

Contains 4 equiv. of water; 3 are basic, and 1 of crystallization. In colourless right rhombic prisms.

Solubility in water, 10 in 6; in glycerine, 1 in 2; in rectified spirit, 10 in 15.

Test.—70 grains dissolved in water require for neutralization 1000 grain-measures of volumetric solution of Soda. 100 grains dissolved in water require for neutralization 150 grains of Bicarbonate of Potash. It leaves no ash when burnt with free access of air. Dissolved in water, it is not darkened with Sulphuretted Hydrogen, and gives no precipitate when dropped into solution of Lime, or when added to a solution of Acetate of Potash or Chloride of Barium—indicating absence of metals, Oxalic, Tartaric, and Sulphuric Acids.

(In all the Pharmacopœias.)

Acid, 1, dissolved in Distilled Water, 14, is a substitute for lemon-juice, but neither of them keep long without spoiling.

17 grs. of Citric Acid, or half a fluid ounce of fresh lemon-juice } neutralize {
25 grs. Bicarbonate of Potash.
20 „ Carbonate of Potash.
20 „ Bicarbonate of Soda.
35 „ Carbonate of Soda.
15 „ Carbonate of Ammonia.
13 „ Carbonate of Magnesia.

Medicinal Properties.

Refrigerant; allays thirst and irritation of the skin.

Prescribed in powders to be taken with each dose of an alkaline mixture during effervescence; or in solution, directing the quantity to be taken with the alkaline mixture.

Dose.—10 to 30 grs. in a wineglassful of water.

INCOMPATIBLES.—Tartrate of Potash, Alkaline Carbonates, Acetates, and Sulphurets.

Contained in Ammoniæ Citratis Liquor, Bismuthi et Ammoniæ Citratis Liquor, Ferri et Ammoniæ Citras, Ferri et Quinæ Citras, Lithiæ Citras, Potassæ Citras, Sodæ Citro-Tartras Effervescens, and in all the granular effervescing citrates.

ACIDUM GALLICUM.

GALLIC ACID.

$3\,HO, C_{14}H_3O_7 + 2\,HO$, or $H_3C_7H_3O_5H_2O$, eq. 188.

In acicular prisms or needles of a pale fawn colour. Prepared from Galls.

Solubility in cold water, 1 in 100; in boiling water, 1 in 3; in rectified spirit, 1 in 8; in Glycerine, 1 in 20; with heat, 1 in 5.

A solution in rectified spirit will mix in any proportion with water without separating, but becomes brown by keeping.

Test.—It leaves no residue when burnt with free access of air. Its solution gives no precipitate with Gelatine, nor does it colour the Protosalts of Iron,—indicating absence of earthy matters and of Tannic Acid.

Care must be taken that the Protosalt of Iron is entirely free from Persalt, or the test fails.

Medicinal Properties.

Astringent; given in all cases where the bleeding vessels must be reached through the circulation; it is considered by some to be more effective than Tannic Acid. It is given also in pyrosis and the night sweats of phthisis.

Dose.—3 to 10 grs. three times a day, dissolved in warm water or suspended in mixture by mucilage, 10 to 60 grs. every five hours in albumenuria, when the urine is of low specific gravity. It is also given in pills: 30 grs. acid and 4 minims of Glycerine will make 6 pills.

INCOMPATIBLES.—The Persalts of Iron.

See GALLA, page 122.

(Brit. 1864, Lond. Dub. Austr. Fr. U.S.; not in others.)

Preparation.

GLYCERINUM ACIDI GALLICI.

Gallic Acid 1, Glycerine 4, dissolve by heat.

(By weight 1 in 6, by measure 1 in 4½).

Dose.—10 to 60 minims.

A new preparation.

ACIDUM HYDROCHLORICUM.

HYDROCHLORIC ACID.

Syn. ACIDUM MURIATICUM PURUM, *Edin. Dub.*

Contains 31·8 per cent. of Hydrochloric Acid gas, HCl.

(Brit. 1864, Lond. and U.S. 32; Edin. and Fr. 34; Dub. 35·4; Belg. 36·2; Pr. 25; Austr. 24.)

Test.—Sp. g. 1·160. 114·8 grains by weight, diluted with ½ oz. of distilled water, require for neutralization 1000 grain-measures of volumetric solution of Soda. When diluted with four times its volume of distilled water, it gives no precipitate with Chloride of Barium, is not discoloured by Sulphuretted Hydrogen or Sulphocyanide of Potassium, and does not tarnish bright copper-foil when boiled in it,—indicating absence of Sulphuric Acid, metals, and Arsenic.

For the tests for Sulphur see ACETIC ACID.

Medicinal Properties.

Given in a very dilute form, as a refrigerant, antiseptic, and tonic; applied with an equal quantity of water to diphtheritic patches in the throat.

Preparation.

ACIDUM HYDROCHLORICUM DILUTUM.

Acid 8; distilled water sufficient to make the mixture, when cooled to 60°, measure 26½.

Contains 10·5 per cent. of acid gas.

(Same as Brit. 1864 and Edin.; Lond. 9; Dub. 9·35; Belg. 6·5; U.S. 7·8; Austr. 12 per cent.; not in Fr. and Pr.)

Test.—Sp. g. 1·052. Six fluid drachms (345 grains by weight) require for saturation 1000 grain-measures of volumetric solution of Soda; it therefore contains 1 equivalent in grains (36½) of Hydrochloric Acid, HCl.

Three and a quarter minims contain 1 minim Strong Acid.

Dose.—10 to 30 minims with bitter infusions; 1 drm. in 8 oz. of Infusion of Roses as a gargle for ulcerated sore-throat.

INCOMPATIBLES.—Salts of Silver and Lead, Tartar Emetic, Alkalies, and their carbonates.

ANTIDOTES.—In cases of poisoning by Hydrochloric Acid, the antidotes are Chalk, Magnesia, and emollient drinks.

ACIDUM HYDROCYANICUM DILUTUM.

DILUTED HYDROCYANIC ACID.

Hydrocyanic Acid, HC_2N or **HCN** (eq. 27), dissolved in water, and constituting 2 per cent. of the solution.

(Same as Brit. 1864, Lond. Dub. Austr. and U. S.; Belg. 2·5; Edin. 4; Fr. *Acide Prussique Médicinal*, 10 per cent.; not in Pr.)

Test.—Sp. g. ·997. 270 grains by weight of the acid, rendered alkaline with the addition of solution of Soda, requires the addition of 1000 grain-measures of the volumetric solution of Nitrate of Silver before a permanent precipitate begins to form, which corresponds to 2 per cent. of anhydrous acid. This test is that of Liebig. The addition of the Soda to the Prussic Acid produces Cyanide of Sodium, and this again becomes Cyanide of Silver when the Nitrate of Silver is dropped in; but as one equivalent of Cyanide of Silver combines with one equivalent of Cyanide of Sodium to form a soluble compound, it is only when exactly one-half of the Cyanide of Sodium has been converted into Cyanide of Silver, that a permanent precipitate is produced.

It gives no precipitate with Chloride of Barium, but with Nitrate of Silver it gives a white precipitate entirely soluble in boiling Nitric Acid—indicating absence of Sulphuric and Hydrochloric Acids.

Contains 2 per cent. anhydrous Prussic Acid.

Medicinal Properties.

As this acid is a dangerous poison, it should never be prescribed alone.

It is sedative, antispasmodic, allays vomiting, is useful in gastrodynia, and in some forms of dyspepsia. Used externally to allay itching of the skin; as Lotion 2 drms. to 8 oz. of Rose Water, as Ointment from ½ drm. to 1 drm. to each ounce of Zinc Ointment.

Prescribed in Almond Emulsion for cough, and with Bicarbonate of Soda and Peppermint Water for dyspepsia.

Dose.—2 to 8 minims.

INCOMPATIBLES.—Salts of Silver, Copper, Iron, Red Oxide of Mercury, Sulphurets.

ANTIDOTES.—In cases of poisoning, the antidotes are, fresh air and artificial respiration, with cold affusion; freshly precipitated Oxide of Iron, with an Alkaline Carbonate.

Preparation.

VAPOR ACIDI HYDROCYANICI.

Hydrocyanic Acid, 10 to 15 minims; Cold Water, 60 minims; mix in a suitable apparatus, and let the vapour that arises be inhaled.

A new preparation.

Not Officinal.

Scheele's Prussic Acid, which is still much used by Apothecaries who dispense their own medicines, contains from 4 to 5 per cent.; but it is more liable to lose power than the Pharmacopœia preparation, and if not kept in a very cool place, will materially diminish in strength, and a larger dose will then be required; if then a fresh supply be procured, the dose must be diminished. This uncertainty is dangerous; the acid therefore that contains more than 2 per cent. should be disused.

ACIDUM NITRICUM.

NITRIC ACID.

Contains 60 per cent. of anhydrous acid, NO_5 or N_2O_5, or 70 per cent. of HO,NO_5 or HNO_3.

(Same as Lond. and U. S.; British 1864, Edin. and Dub. 79·7; Pr. Fumans more than 79·7; Fr. and Belg. 53·4; Austr. 40 per cent.)

Test.—Sp. g. 1·420. 90 grains by weight, mixed with half an ounce of distilled water, require for neutralization 1000 grain-measures of the volumetric solution of Soda. Evaporated, it leaves no residue. Diluted with six volumes of distilled water, it gives no precipitate with Chloride of Barium or Nitrate of Silver—indicating absence of Sulphuric and Hydrochloric Acid.

5 measures of Acid, sp. g. 1·500, and 2 of water mixed, condenses into 6½ measures, and makes the sp. g. 1·420.

Medicinal Properties.

It is strongly corrosive, and is applied as a caustic to phagedenic sores and chancres by means of a pointed glass rod. When diluted it is refrigerant, tonic, and antiseptic. Given in a very diluted form as a drink in febrile diseases, especially typhus, and when much diluted as an injection in phosphatic calculus.

Preparation.

ACIDUM NITRICUM DILUTUM.

Nitric Acid, 6; distilled water sufficient to make the mixture when cooled to 60°, measure 31. Contains 15 per cent. of anhydrous acid.

(Same as Brit. 1864; Lond. 12; Edin. 11·2; Dub. 13·5; U.S. 10 per cent.; Belg. 17·5; Austr. 20; not in Fr. and Pr.)

Test.—Sp. g. 1·101. Six fluid drachms (361·3 grains by weight) require for neutralization 1000 grain-measures of volumetric solution of Soda, and therefore contains exactly one equivalent in grains of anhydrous Acid, namely 54 grs.

5 minims contain 1 minim of Strong Acid.

Prescribed with bitter infusions and Tincture of Orange. Infusion of Roses made with this acid, instead of Sulphuric Acid, and sweetened, is the most elegant form for administering Quinine with an astringent. Sulphuric Acid, by precipitating the Tannate of Quinine, makes a turbid mixture (Pharm. Journ., vol. i. p. 585).

Dose.—10 to 30 minims.

INCOMPATIBLES.—Alcohol, Alkalies, Oxides, Earths, Sulphate of Iron, Acetate of Lead, all Carbonates and Sulphurets.

ANTIDOTES.—In case of poisoning by Nitric Acid, the antidotes are Chalk, Magnesia, emollient drinks.

ACIDUM NITROHYDROCHLORICUM DILUTUM.

DILUTE NITRO-HYDROCHLORIC ACID.

Nitric Acid, 3; Hydrochloric Acid, 4; Water, 25.—Mix the acids 24 hours before adding the water.

Test.—Sp. g. 1·074. 6 fluid drachms (352·4 grains by weight) require for neutralization 920 grain-measures of the volumetric solution of Soda.

(Same as Brit. 1864. The concentrated acids are directed in Dub. and all the foreign Pharmacopœias, but the U. S. has both the concentrated, and the diluted corresponding in strength to the other diluted acids. The acids, however, are very properly ordered to be mixed together twenty-four hours, to develope the Chlorine before the water is added.)

16 minims contain 1½ minim of Nitric Acid, 2 minims Hydrochloric Acid.

Medicinal Properties.

Tonic, stomachic, alterative. Externally as a lotion or bath, for obstructions of the liver.

Dose.—5 to 20 minims in 1½ oz. Water, with Succus Taraxaci, or Tinct. Aurantii.

Directions for Preparing and Using the Bath.

Mix 8 ounces by measure of this acid with 1 gallon of pure water, temperature 96° or 98° F. Let a flannel roller* of ten or twelve inches wide, and sufficient to encircle the body twice, be soaked in the fluid and then wrung, so as to remain only damp. Apply this instantly to the body, covering it with a piece of oiled silk to avoid damping the dress. It should be worn constantly, but should be changed, soaked, and wrung, morning and evening. Glass, glazed earthenware, or wooden vessels should be used. Sponges and towels to be kept in water to prevent them corroding.

ACIDUM PHOSPHORICUM DILUTUM.

DILUTED PHOSPHORIC ACID.

3 HO,PO_5 or H_3PO_4, eq. 98, dissolved in water.

Contains 10 per cent. of anhydrous acid PO_5 or P_2O_5.

(Same as British 1864; Lond. 8·7 per cent. sp. g. 1·064; Fr. 52, sp. g. 1·454; Belg. 40, sp. g. 1·350; Pr. and Austr. Acid. Phosphoric. 16, sp. g. 1·130; U. S. 8, sp. g. 1·056; not in Edin. and Dub.)

Test.—Sp. g. 1·080. 6 fluid drachms (355 grains by weight) poured upon 180 grains of Litharge in fine powder, leave, after evaporation, a residue which, heated to redness, weighs 215·5 grains, and is anhydrous Phosphate of Lead, showing that there is 35·5 grs. or half an equivalent of anhydrous Acid. It is not precipitated by Sulphuretted Hydrogen, Chloride of Barium, Nitrate of Silver acidulated with Nitric Acid, or by a solution of Albumen—indicating absence of metals, Sulphuric Acid, Hydrochloric Acid, and Metaphosphoric Acid. When mixed with an equal volume of pure Sulphuric Acid, and then introduced into the solution of Sulphate of Iron, it does not communicate to it a dark colour—indicating absence of Nitric Acid.

Six fluid drachms contain half an equivalent PO_5, or a quarter of an equivalent P_2O_5.

Medicinal Properties.

Tonic and refrigerant, having properties similar to Sulphuric Acid, but more palatable; it is said to correct the phosphates in the urine, and to allay thirst in diabetes. Given with Phosphate of Lime in rickets. It is also found useful in cases with vomiting and diarrhœa, arising from a bilious attack; given in frequent doses.

Dose.—10 to 30 minims largely diluted with water.

Prescribed with some bitter and aromatic tinctures and syrups, or with the syrup

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* These with the oiled silk attached can be had of the Chemists, ready made.

of the Phosphate of Iron, but not with the syrup of Pyrophosphate of Iron, as th mixture becomes solid.

Used to prepare Syrupus Ferri Phosphatis.

INCOMPATIBLES.—Lime Water, Calcareous Salts, Carbonate of Soda.

ACIDUM SULPHURICUM.

SULPHURIC ACID.

Contains 96·8 per cent. of Sulphuric Acid, HO,SO_3, eq. 49; or H_2SO_4 eq. 98; and corresponds to 79 per cent. anhydrous Acid, SO_3 or SO_3.

(In all the Pharmacopœias, ranging from sp. g. 1·843 to 1·847.)

Test.—Sp. g. 1·843.* Half a fluid drachm (50·6 grains by weight) mixe with an ounce of distilled water, requires for neutralization 1000 grain-measure of volumetric solution of Soda. Evaporated in a platinum crucible, leaves n residue. Diluted with six times its volume of distilled water, it gives n precipitate with Sulphuretted Hydrogen. When a solution of Sulphate c Iron is poured upon it, no purple ring is formed at the surface of the tw solutions—indicating absence of fixed impurities, Arsenic and Nitrous Acic Sulphate of Lead falls in a white precipitate by dilution merely. Arsenic i detected by Sulphuretted Hydrogen; Nitrous Acid by Sulphate of Iron.

Medicinal Properties.

A powerful caustic, and when so used it is made into a paste with an equa quantity of charcoal; when diluted it is tonic, refrigerant, astringent, excitin the appetite and promoting digestion.

Preparations.

ACIDUM SULPHURICUM AROMATICUM. ELIXIR OF VITRIOL.

Contains 10·9 per cent. of anhydrous acid.

(Same as Brit. 1864; Edin. and Dub. 15; U. S. 10·5 per cent.; not in others.)

Sulphuric Acid, 3; Rectified Spirit, 40; Cinnamon in powder, 2; Ginge in powder, 1¼: mix the acid gradually with 35 of the spirit, add the powders and macerate for seven days; filter and add spirit to make 40.

Test.—Sp. g. 0·927. Six fluid drachms (304·2 grains by weight) requir for neutralization 830 grain-measures of the volumetric solution of Sod containing therefore 33·2 grains of anhydrous Acid.

Best prescribed alone, to be taken in water.

Dose.—5 to 30 minims.

Not Officinal.

MYNSICHT'S ELIXIR OF VITRIOL.—Cinnamon, Ginger, Cloves, each 3; Calamu Aromaticus, 8; Galangal, 12; Sage, 4; Peppermint, 4; Cubebs, 2; Nutmeg, 2; Aloes wood, 1; Lemon-peel, 1; Sugar-candy, 32; Rectified Spirit, by weight, 144; Sulphuri Acid, by weight, 96. Digest for three weeks.

Dose.—5 to 10 minims.

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* True Monohydrated Sulphuric Acid has a sp. g. 1·848.

ACIDUM SULPHURICUM DILUTUM.

Contains 10·14 per cent. of anhydrous Acid.

(Same as Brit. 1864 and Dub.; Lond. 12; Edin. 11; Pr. Belg. 13·5; Austr. 11; Fr. and U. S. 10 per cent.)

Sulphuric Acid, 3; distilled water, q. s. to measure $35\frac{3}{4}$: mix gradually; or 1350 grains by weight of Acid, and distilled water sufficient to measure 20 oz.

Test.—Sp. g. 1·094. 6 fluid drachms (359 grains by weight) require for neutralization 1000 grain-measures of the volumetric solution of Soda indicating 1 equivalent or 40 grains of the anhydrous acid. If the strong Acid contains Sulphate of Lead, it is precipitated when diluted.

Six fluid drachms contain one equivalent SO_3, or half an equivalent $\mathbf{SO}_3$. 12 minims contain 1 minim of strong Sulphuric Acid.

Prescribed largely diluted in mixtures: or in cough linctuses, with Confection of Hip and Syrup of Mulberries.

Dose.—5 to 20 minims.

Contained in Infusum Rosæ Acidum, 1 in 80.

INCOMPATIBLES.—Alkalies and their Carbonates, Salts of Lead and Lime.

ANTIDOTES.—In case of poisoning by Sulphuric Acid, Magnesia is preferred to Chalk.

ACIDUM SULPHUROSUM.

SULPHUROUS ACID.

Sulphurous Acid SO_2, eq. 32, or $\mathbf{SO}_2$, eq. 64, dissolved in water.

Contains 9·2 per cent. by weight, or about 20 times its volume, of Sulphurous Acid gas.

(Same as Brit. 1864 and U. S.; not in others.)

Test.—Sp. g. 1·040. 34·7 grains mixed with a little mucilage of Starch does not acquire a permanent blue colour with a volumetric solution of Iodine, until 1000 grain-measures of the latter have been added. Evaporated, it leaves no residue. This is a test of its strength, for if there is sufficient Sulphurous Acid, it will convert the whole of the 1000 grain-measures of volumetric solution of Iodine into Hydriodic Acid, which acid does not permanently render Starch blue.

Should be recently prepared, as it changes by long keeping into Sulphuric Acid.

Medicinal Properties.

It is a powerful deoxidizing agent, disinfecting and antiseptic, and destructive to vegetable life. It is given internally for sarcina ventriculi, and when mixed with two or three times its bulk of water or with an equal bulk of Glycerine, is an excellent application to the skin to destroy parasitic lichens, more especially to remove the crusts in favus.

Dose.—½ to 1 drm., largely diluted with water. As a lotion, 1 part to 8 of water.

Not Officinal.

SULPHITE OF SODA and HYPOSULPHITE OF SODA will be found under "SODA;" still as they are used for the purpose of eliminating Sulphurous Acid, they are noticed here.

ACIDUM TANNICUM.

TANNIC ACID.

An acid, $C_{54}H_{22}O_{34}$, or $C_{27}H_{22}O_{17}$, eq. 618, obtained from Galls. In pale yellow amorphous powder.

100 Galls produce 33 Tannic Acid.

(In all the Pharmacopœias except Edin.)

Solubility in water, 10 in 8; in rectified spirit, 1 in 1; in Ether, sparingly; in Glycerine, 1 in 8, or if warmed, 1 in 2.

Test.—Exposed to heat it partly melts, swells up, blackens, and at length burns away with a brilliant flame, leaving no residue. The organic matter is first reduced to charcoal, and then burnt away—indicating absence of earthy matters. It strikes a blue colour with persalts of iron, and precipitates Gelatine,—which distinguishes it from Gallic Acid.

Medicinal Properties.

Styptic, astringent, in uterine hæmorrhage, dysentery, and diarrhœa.

Dose.—3 to 10 grs.

Prescribed in water, and may be combined with the protosalts (but not with the persalts) of Iron; with Potash, Soda, and Ammonia. 1 minim of Glycerine with 4 grs. makes a nice pill. Externally as a styptic, dissolved in Glycerine; as a wash, 5 grs. to 1 oz. of water; in ointments 40 grs. to 1 oz. 60 grs. to 1 oz. of Chalk makes an astringent dentifrice. For an injection, 5 grs. to 1 oz. of water.

INCOMPATIBLES.—Mineral Acids, Alkalies, Salts of Lead, Silver, Iron, Antimony, the Vegetable Alkaloids, Gelatine, and Emulsions.

Preparations.

GLYCERINUM ACIDI TANNICI.

Tannic Acid, 1; Glycerine, 4. Rub well together, and dissolve by a gentle heat. (By weight 1 in 6, by measure 1 in $4\frac{1}{2}$.)

Dose.—10 to 40 minims.

A new preparation.

SUPPOSITORIA ACIDI TANNICI.

Tannic Acid, 36 grs.; Benzoated Lard, 44 grs.; White Wax, 10 grs.; Oil of Theobroma, 90 grs. Melt the Wax and Oil with a gentle heat, then add the Tannic Acid and Benzoated Lard previously rubbed together, and mix thoroughly. Pour the mixture while it is fluid into suitable moulds of the capacity of 15 grains.

Each conical suppository will contain 3 grains of Tannic Acid.

Brit. 1864 each suppository contained 2 grains.

TROCHISCI.

Tannic Acid, 360 grs.; Tincture Tolu, $\frac{1}{2}$ oz.; Refined Sugar, 25 oz.; Gum Acacia, 1 oz.; Mucilage Acacia, 2 oz.; distilled water, 1 oz. Dissolve the Tannic Acid in the water; add, first, the Tincture of Tolu previously mixed with the Mucilage, then the Gum and the Sugar, also previously well mixed. Form the whole into a proper mass; divide it into 720 lozenges, and dry these in a hot-air chamber with a moderate heat.

Each lozenge contains half a grain.

Dose.—1 to 6 lozenges.

(Same as Brit. 1864.)

Not Officinal.

PESSARY OR VAGINAL SUPPOSITORY.—Tannic Acid, 10 grs.; White Wax, 25 grs.; melt and add Lard, 1½ drm. For one suppository; used in leucorrhœa.

1 drm. of Tannic Acid in a conical suppository with Glycerine placed in the vagina, and plugged in with a sponge, effectually stops hæmorrhage.

ACIDUM TARTARICUM.

TARTARIC ACID.

An acid, 2 HO, $C_8H_4O_{10}$, or $H_2C_4H_4O_6$, eq. 150, obtained from the Acid Tartrate of Potash. In colourless, oblique, rhombic prisms, of a strongly acid taste.

(In all the Pharmacopœias.)

Solubility in water, 10 in 8; in rectified spirit, 1 in 8.

Test.—100 grains neutralize 133 grains of Bicarbonate of Potash. 75 grains dissolved in water require for saturation 1000 grain-measures of volumetric solution of Soda. Its aqueous solution is not affected by Sulphuretted Hydrogen, and gives no precipitate with solution of Sulphate of Lime, or Oxalate of Ammonia—indicating absence of metallic contamination and Lime. If free from Lime, it should leave no residue when burnt. It is distinguished from all other acids by forming with a solution of any neutral salts of Potash, a crystalline precipitate (a bitartrate).

Medicinal Properties.

The same as Citric Acid, for which it was once substituted in saline mixtures.

Dose.—10 to 30 grs. in water.

When citric acid was very dear, tartaric acid was much employed to make saline draughts, and it frequently perplexed the dispenser, for if the bicarbonate of potash was added to a solution of tartaric acid, bitartrate was immediately formed, and was precipitated, whereas if tartaric acid was added to the potash salt, it might be added to the point of saturation, and remain perfectly soluble.

Contained in the tartrates of alkalies, antimony, and iron.

INCOMPATIBLES.—The Alkalies; Salts of Potash, of Lime, of Mercury, and of Lead; and the Vegetable astringents.

ACONITI FOLIA.

ACONITE LEAVES.

HERB.

The fresh leaves and flowering tops of *Aconitum Napellus*, gathered when about one-third of the flowers are expanded, from plants cultivated in Britain.

(In all the Pharmacopœias.)

Medicinal Properties.

Anodyne. Relieves acute rheumatism, gastrodynia, and carcinoma. It diminishes expectoration in phthisis.

Preparation.

EXTRACTUM.

Take 112 pounds of the fresh leaves and flowering tops, bruise them, press out the juice, heat it gradually to 130°, and separate the green matter by a calico filter. Heat the strained liquor to 200° to coagulate the Albumen, and again filter. Evaporate the filtrate by a water bath to the consistence of a thin syrup; then add to it the green colouring matter previously separated, and stirring the whole together assiduously, evaporate at a temperature not exceeding 140° to a pill consistence.

100 lb. of plant produces 50 lb. of juice=7 lb. extract, subject to variation.

(Same as Brit. 1864; same strength as Lond. and about half that of Edin. and Austr.; U. S., alcoholic, from dried leaves; Belg. ditto, with Sugar of Milk; Fr., Pr., alcoholic and from the root.)

Dose.—1 to 2 grs.

Not Officinal.

SUCCUS.—Aconite Herb juice, 3; Rectified Spirit, 1: mix, and after seven days filter.

Dose.—15 to 20 minims.

ACONITI RADIX.

ACONITE ROOT.

The root collected during winter and dried, or imported from Germany.

(Brit. 1864, Lond. Dub. Pr. and U. S. only.)

Medicinal Properties

As that of the plant, but possessed in a stronger degree. Internally, it lowers the pulse; externally, it relieves rheumatism.

Preparations.

LINIMENTUM.

Aconite Root, in powder, 20; Camphor, 1; Rectified Spirit to percolate, 20: moisten the root for three days, then pack in a percolator, and pour sufficient Rectified Spirit upon it to produce with the Camphor 20.

Same as Brit. 1864. =(1 in 1).

Applied with a camel's-hair pencil, alone or mixed, in equal proportions, with soap liniment or compound camphor liniment, and rubbed on the part.

7 parts of this mixed with 1 part of Chloroformum Belladonnæ, and sprinkled thinly on impermeable piline, is the best application for neuralgia or lumbago.

TINCTURA.

Powdered root, 1; Rectified Spirit to percolate, 8: macerate for forty-eight hours with three-fourths of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit; when it ceases to drop, press the marc and add spirit to make up 8. =(1 in 8).

(Same as Brit. 1864, and Pr. This tincture is one-third the strength of Lond.; one-fourth of Dub.; one-sixth of Fleming's tincture; U. S. 1 in 2½; Austr. Belg. Fr. made with leaves; not in Edin.)

Dose.—5 to 10 minims twice or thrice a day.

It is said by Dr. Fleming to be less likely to irritate the bowels than the extract.

ANTIDOTES.—In case of poisoning by Aconite, the antidotes are emetics, stimulants internal and external.

Not Officinal.

EXTRACTUM ACONITI RAD. ALCOHOLIC. Same as present Prussian. Dose ½ gr.

LISTON'S STRONG TINCTURE and FLEMING'S TINCTURE will doubtless be superseded by the Linimentum, and if this is mixed with lard in the proportion of 2 drms. to 1 oz. of lard, it may answer all the purposes of the very expensive preparation of Aconitine ointment.

ACONITIA.

ACONITINE.

An alkaloid, $C_{60}H_{47}NO_{14}$, eq. 533, obtained from Aconite Root. A white, usually amorphous powder.

(Brit. 1864, U.S. and Belg.; not in others.)

Solubility 1 in 150 in cold water, 1 in 50 in boiling water, more soluble in Alcohol; entirely in pure Ether.

Test.—When burnt it leaves no residue.

Medicinal Properties.

Not for internal use.

It relieves acute nervous pain when rubbed on the part in the form of ointment.

Preparation.

UNGUENTUM.

Aconitia, 8 grs.; Rectified Spirit, ½ drm.; dissolve and add Lard, 1 oz.: mix. =(1 in 60).

(Brit. 1864.)

Not Officinal.

ACTÆA RACEMOSA.

TINCTURA.

Bruised Root, 1; Proof Spirit, 4: macerate fourteen days.

Medicinal Properties.—Given internally for neuralgia and rheumatism.

Dose.—30 to 60 minims.

ADEPS PRÆPARATUS.

PREPARED LARD.

Syn. AXUNGIA, *Edin.*

Hog's fat deprived of its membranes, and purified by heat.

Take of the internal fat of the abdomen of the hog, perfectly fresh, 14 pounds. Remove as much of the membranes as possible, cut the fat into small pieces, put it into a suitable vessel with about 4 gallons of cold water, and while a current of water is running through the vessel, break up the masses of fat with the hands, exposing every part to the water, so that whatever is soluble may thus be dissolved and carried away. Afterwards, collect the washed fat on a sieve or in a cloth, drain away as much as possible of the water, liquefy the fat at a heat not exceeding 212° and strain through flannel, pressing the

residue while hot, then put into a pan heated by steam, and keep it at a temperature a little above 212°, stirring it continually until it becomes clear and entirely free from water, finally strain through flannel.

Soluble entirely in Ether; melts at 100° F. Lard is not adulterated as a rule, but it is frequently prepared with little care, and consequently bad in colour and odour. Should be freshly prepared from flare of recently-killed pork, the membrane being first carefully picked out. It is then liquefied over a water-bath at a boiling heat, strained through flannel, and again heated until bright and entirely free from water. (*No salt to be added.*) It is apt to grow rancid by keeping, and even becomes mouldy if it contains water.

It is the basis of several ointments.

Medicinal Properties.

Emollient. Added to poultices to prevent their drying and sticking to the skin. Used also in scabies, and to destroy pediculi.

(In all the former and foreign Pharmacopœias.)

Used in all the Ointments, except those prepared with Benzoated Lard.

ADEPS BENZOATUS.

BENZOATED LARD.

Prepared Lard, 16 oz.; Benzoin, in powder, 160 grains: heat together for 2 hours, stirring occasionally, and strain. =(1 in 45).

Used for making Suppositories, and for the following Ointments, Galls, Lead, Sulphur, and Zinc.

A new preparation.

Not Officinal.

Adeps Odoriferus, made by mixing Lard and Magnolia Pomade, in equal weights.

Adeps Oxygenatus is made by heating 8 of Lard with 1 Nitric Acid, sp. g. 1·500, added by degrees, and stirring till Nitrous Acid gas is given off, then remove from the fire and continue the stirring until it solidifies. Useful to dilute Citrine Ointment; for when Lard is used it reduces the mercury, and thereby destroys the lemon colour of the ointment. It is, however, found too hard for use in cold weather, and is then better prescribed with half its amount of Almond Oil.

A good Substitute for Lard is—

Linimentum Simplex (Edin.).—Wax, 1; Olive Oil, 4; liquefied together over a water bath. This does not become rancid for many months.

A mixture of Cacao butter and the best Olive Oil, in equal weights, keeps longer free from rancidity perhaps than any other substitute for lard, and is preferable to it for preparing Zinc Ointment.

Kokum Oil 2, and Oil of Almonds 3 by weight, forms another good substitute, and keeps remarkably sweet. (Olive Oil will not answer.)

ÆTHER.

ETHER.

Syn. Æther Sulphuricus, *Edin. Dub.*

Contains 92 per cent. of pure Ether (Oxide of Ethyl), C_4H_5O, eq. 37, or $C_4H_{10}O$, eq. 74, with about 8 per cent. of rectified spirit.

Solubility in water, 1 in 10; freely in rectified spirit. It should be diluted with spirit before being administered, it then mixes freely with water.

(Same as Brit. 1864; Edin. Lond. and Dub., sp. g. ·750; Belg. ·740; Austr. ·730; and Fr. ·723; Pr. ·728; U.S. ·728.)

Test.—Sp. g. ·735. 50 measures agitated with an equal volume of distilled water, are reduced to 45 by an absorption of 10 per cent. It scarcely reddens litmus; agitated with half its volume of a saturated solution of Chloride of Calcium, it is not lessened in bulk. Indicating absence of acid and water.

Characters and Properties.

It is colourless, of a strong and sweet odour, hot and pungent in taste. It evaporates speedily in the open air, with the production of considerable cold. When good, it evaporates from the hand without leaving a disagreeable odour. It boils below 105°, and its vapour is very dense and very inflammable. It dissolves Iodine and Bromine freely; Sulphur and Phosphorus sparingly. It dissolves Corrosive Sublimate freely, and if Ether be boiled with Calomel contaminated with it, decanted and evaporated, the crystals of corrosive sublimate are left. It is also a solvent of the volatile and fixed oils, many resins and balsams, tannic acid, caoutchouc, and most of the organic vegetable alkaloids. It does not dissolve Potash and Soda, in which respect it differs from Alcohol. Water dissolves a tenth of its volume of Ether, and reciprocally Ether takes up about the same proportion of water. When water dissolves more than a tenth of its volume, the Ether contains water or Alcohol or both. Ether unites in all proportions with Alcohol.

Note.—Methylated Ether leaves an odour after it has evaporated.

Medicinal Properties.

It is a powerful, diffusible stimulant, expectorant, antispasmodic, and narcotic. Used to expel flatus from the stomach, and to allay pain and cramp in that organ. In nausea it is given as a cordial. It was formerly used for inhalation, and is still preferred by some to chloroform as an anæsthetic.*

Dose.—20 to 40 minims.

Contained in Collodium and Collodium Flexile, and Liquor Epispasticus.

Preparation.

SPIRITUS ÆTHERIS. Called Hoffman's Anodyne Spirit. Sp. g. ·809.

Ether, 1; Rectified Spirit, 2. =(1 in 3).

(Same as Brit. 1864, and Edin.; Dub. Spiritus Ætheris Oleosus; Lond. and U.S. Spiritus Ætheris Compositus, with Æthereal Oil; Belg. Æther Sulphuricus Alcoholicus, sp. g. ·795; Pr. sp. g. ·812; Austr. sp. g. ·820; Fr. equal weights.)

Dose.—30 to 60 minims.

Prescribed with camphor-water, and frequently with sal volatile or volatile tincture of valerian.

Contained in Tinctura Lobeliæ Ætherea.

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* The Author devised the first apparatus for the inhalation of Ether, which he has presented to the Museum of University College. Mr. Liston performed the first capital operation in this country with this apparatus; the patient not suffering the least pain, nor indeed, after the return of consciousness, could he be persuaded that his leg was off until he placed his hand upon the stump.

ÆTHER PURUS.

PURE ETHER.

Ether, C_4H_5O or $C_4H_{10}O$, free from Alcohol and water; shake 20 of Ether with 10 of water in a bottle, and after a few minutes decant the Ether, mix it with 10 of fresh water, and shake again and again decant. Put the decanted Ether into a retort, with $\frac{1}{8}$ of recently-burnt lime and 2 of dried Chloride of Calcium; attach closely a receiver, and let them stand 24 hours, then distil with a gentle heat, sp. g. ·720.

This is not always strong enough to produce insensibility with the spray apparatus, for operations; a light Petroleum Ether is made, of the sp. g. ·625; 4 of this mixed with 1 of Ether has the same sp. g. (·640) as the Compound Anæsthetic Ether of Dr. Richardson.

ÆTHERIS NITROSI SPIRITUS.

See SPIRITUS ÆTHERIS NITROSI.

ALBUMEN OVI.

EGG ALBUMEN.

The liquid white of egg of *Gallus Banckiva*, var. *domesticus*.

ALCOHOL AMYLICUM.

FOUSEL OIL.

Used in the production of Valerianate of Soda.

ALOE BARBADENSIS.

BARBADOES ALOES.

The juice of the leaf of the *Aloe vulgaris*, inspissated; imported from Barbadoes in gourds.

Solubility: in water, 75 per cent.

It is found by experiment that the aqueous extract is by far more active than is the resinous portion of Aloes; the Barbadoes Aloes containing a larger amount of this than the Socotrine, is perhaps the reason why the Barbadoes is the most purgative. Thus, 2 grs. are equal to 3 of Socotrine.

Medicinal Properties.

Purgative, acting chiefly on the large intestine. Employed as an enema in dislodging ascarides from the rectum, also as a stimulating cathartic in the constipation of amenorrhœa.

(In Brit. 1864, Lond. Edin. Fr. and U. S.; not in others.)

Dose.—2 to 4 grs.

Contained in Pil. Cambogiæ Comp., Pil. Colocynthidis Comp., and Pil. Colocynthidis et Hyoscyami.

Preparations.

ENEMA ALOES BARBADENSIS.

Barbadoes Aloes, 40 grs.; Carbonate of Potash, 15 grs.; mucilage of Starch, 10 oz.: mix for one enema.

(Same strength as Brit. 1864, and Lond.; not in others.)

EXTRACTUM ALOES BARBADENSIS.

Barbadoes Aloes, 1 lb., in small pieces, treated with 1 gallon of boiling water for twelve hours, and the clear liquor evaporated.

(Same as Brit. 1864, and Lond.; not in others. 100 of Aloes yield 75 of extract.)

Dose.—1 to 3 grs. British Ph. 2 to 6 grs.

PILULA ALOES BARBADENSIS.

Barbadoes Aloes, in powder, 2; Hard Soap, in powder, 1; Oil of Caraway, $\frac{1}{8}$; Confection of Roses, 1. =(1 in 2).

(Brit. 1864; 50 per cent. stronger than Pil. Aloes cum Sapone, Lond., which was made with the *Extract*, and represented the Pil. Aloes Diluta of Dr. Marshall Hall. Not in other Pharmacopœias.)

Dose.—4 to 8 grs.

PILULA ALOES ET FERRI.

Barbadoes Aloes, 2; Sulphate of Iron, $1\frac{1}{2}$; Compound Powder of Cinnamon, 3; Confection of Roses, 4: mix. 6 of Confection required. =(1 in 5.)

(Edin. formula, but with only half the quantity of Aloes.)

Dose.—5 to 10 grs.

Not Officinal.

ALOINE.—A yellow crystalline substance, obtained from Aloes.

Dose.—1 to 2 grs. in pill.

ALOE SOCOTRINA.

SOCOTRINE ALOES.

The juice of the leaf of one or more undetermined species of Aloe, inspissated.

Usually imported in skins and casks from Bombay; produced in Socotra.

Solubility in water, 50 per cent.

Medicinal Properties.

Purgative. Given in mesenteric disease and distended bowels: said to aggravate hæmorrhoids. Although the purgative property acts chiefly on the lower portion of the intestinal canal, it produces on the upper part tonic and stomachic effects, when small doses only are given. One grain, with $\frac{1}{3}$ gr. Extract of Nux Vomica, is an excellent pill for this purpose, and to relieve chronic dyspepsia. Aloes, combined with Rhubarb and Scammony, where there is a defective secretion of bile; with iron and myrrh for amenorrhœa.

(In all the Pharmacopœias; Pr. Aloe Capensis.)

Dose.—2 to 6 grs.

Contained in Extractum Colocynth. Co. (Extract); Pil. Rhei Co., and Tinct. Benzoini Co.

Preparations.

DECOCTUM ALOES COMPOSITUM.

Extract of Socotrine Aloes, 120 grs.; Myrrh, 90 grs.; Saffron, 90 grs. Carbonate of Potash, 60 grs.; Extract of Liquorice, 1 oz.; Compound Tincture of Cardamoms, 8 oz.; distilled water, a sufficiency. Reduce the Extract of Aloes and Myrrh to coarse powder, and put them, together with the Carbonate of Potash and Extract of Liquorice, into a suitable covered vessel with a pint of distilled water, boil gently for five minutes, then add the Saffron; let the vessel with the contents cool, then add the Tincture of Cardamoms, and covering the vessel closely allow the ingredients to macerate two hours, finally strain through flannel, pouring as much distilled water over the contents of the strainer as will make the strained product measure 30 oz. More liquorice would make it palatable. 4 grs. in 1 oz. = (1 in 120).

(Brit. 1864, 1 in 85 = 5·6 grs. in 1 oz.; Lond. 1 in 144 = 3·3 grs. in 1 oz.; Edin. 1 in 128 = 4 grs. in 1 oz.; Dub. 1 in 75 = 6 grs. in 1 oz.)

Dose.—½ to 1½ oz. as a mild cathartic, tonic, and antacid. Known to the public as the Baume de Vie.

ENEMA ALOES SOCOTRINÆ.

Socotrine Aloes, 40 grs.; Carbonate of Potash, 15 grs.; mucilage of Starch, 10 oz.: mix for one enema.

As an anthelmintic 3 to 4 ounces only should be used.

(Same as Brit. 1864 and Lond.)

EXTRACTUM ALOES SOCOTRINÆ.

Socotrine Aloes, 1 lb.; treated with 1 gallon of boiling water for twelve hours, and the clear liquor evaporated to dryness.

(In all the Pharmacopœias except Edin. 100 of Aloes yield 50 extract.)

Dose.—1½ to 3 grs. British Ph. 2 to 6 grs.

The extract being more active than the Aloes, a smaller pill can be given, and it has the advantage of acting more pleasantly.

PILULA ALOES SOCOTRINÆ.

Socotrine Aloes in powder, 2; Powdered Hard Soap, 1; Volatile Oil of Nutmeg, ⅛; Confection of Roses, 1. =(1 in 2).

(Same as Brit. 1864; Lond. 1 in 3; Belg. and Fr., Pil. Aloes cum Sapone, 1 in 2; U. S. 1 in 2; Edin. Pil. Aloes, 1 in 2½; not in others.)

Dose.—5 to 10 grs.

PILULA ALOES ET ASSAFŒTIDÆ.

Socotrine Aloes in powder, 1; Assafœtida, 1; Powdered Hard Soap, 1; Confection of Roses, 1. ¼ Confection is sufficient. Of each = (1 in 4).

(Same as Brit. 1864, Edin.; U. S. 1 in 3, omitting Conf. Rosæ; not in others.)

Cathartic and antispasmodic.

Dose.—5 to 10 grs.

PILULA ALOES ET MYRRHÆ.

Socotrine Aloes, 2; Myrrh, 1; Dried Saffron, ½; Confection of Roses, 2½. 3 are required. =(1 in 3).

(Same as Brit. 1864 and Edin.; Lond. and Dub. with Treacle instead of Conf. Roses; not in others.)

Stimulant and cathartic.

The formula is very old. It was called Pil. Ruffi two hundred years ago.

Dose.—5 to 10 grs.

TINCTURA ALOES.

Socotrine Aloes, 1; Extract of Liquorice, 3; Proof Spirit, 40; macerate seven days, press, and wash the marc with spirit to make 40. =(1 in 40).

(Same as Brit. 1864, Lond. and Edin.; U. S. 1 in 30; Austr. and Belg. 1 in 6; Fr. with Cape Aloes and Proof Spirit, 1 and 5 by weight, or 1 in 6 by measure; Pr. with Rectified Spirit and without Liquorice, 1 and 6 by weight, or 1 in $7\frac{1}{2}$ by measure.)

Dose.—1 to 2 drms.

VINUM ALOES.

Aloes, $1\frac{1}{2}$ oz.; Ginger in coarse powder, 80 grs.; Cardamom seeds bruised, 80 grs.; Sherry, 40 oz.: digest seven days, strain, and make up to 40. =(1 in $26\frac{3}{4}$).

Proportions: Aloes 8, Ginger 1, Cardamoms 1, Sherry 214.

(Brit. 1864, nearly as Edin.; Lond. 1 in 20, with Canella; U. S. 1 in $16\frac{1}{2}$; not in others.)

Dose.—1 to 2 drms.

ALUMINIUM.

ALUMINUM.

Al; eq. 13·75.

A silver-white metal, sonorous, and lighter than glass, having the sp.g. 2·560. Indicated by Sir Humphry Davy in 1808; made by Wöhler by decomposing its chloride with Sodium in 1828, and first produced in ingots by M. Deville in 1854. It resists the action of Nitric and Sulphuric Acids, but is readily attacked by Hydrochloric Acid. Its oxide, being identical with Sapphire, forms an impermeable crust on the surface of the metal, and protects it from further action of the air. Its use is limited at present to jewellery, but, from its extreme lightness and tenacity, it promises to be much more extensively employed if some means of soldering it together could be discovered.

Neither Aluminium nor Alumina is in the British Pharmacopœia. Alumina, however, is much used to fine turbid medicinal waters, or other solutions, and is easily obtained by adding in excess a solution of Carbonate of Potash to a solution of Alum, and well washing the precipitate.

Roche Alum is scarcely ever used.

ALUMEN.

ALUM.

Sulphate of Alumina and Ammonia, $NH_4O,SO_3,Al_2O_3,3SO_3,24HO$, or $\mathbf{NH_4,Al(SO_4)_2,12H_2O}$.

Alum is produced by the combustion of Alum Schist, and subsequent exposure to air, and by the addition of Sulphate of Ammonia.

In colourless transparent crystalline masses, exhibiting the faces of the regular octahedron.

Solubility in water, 1 in 12; in boiling water, 10 in 8; in Glycerine 1 in 2, and measures $2\frac{1}{2}$.

Insoluble in rectified and proof spirit.

Test.—Entirely soluble in hot solution of Soda evolving Ammonia. Not coloured blue by a mixture of the Ferrocyanide and Ferridcyanide of Potassium,—indicating absence of iron.

Medicinal Properties.

Astringent, given internally in ten-grain doses; purgative in drachm doses; emetic in repeated doses.

Prescribed in syrup or treacle, 15 grs. three times a day for internal hæmorrhage; has been known to succeed in bleeding from the kidney, when gallic acid has failed; may be combined with kino, etc.; also used as a gargle for relaxed throat; or for an injection in leucorrhœa, etc., 1 to 2 drms. in 6 oz. of water; as a lotion for the eyes in children or adults when there is mucus or purulent matter,—1 to 3 grs. in 1 oz. of water.

Dose.—10 to 15 grs.; a teaspoonful in honey or treacle for an emetic.

Preparation.

ALUMEN EXSICCATUM. *Syn.* ALUMEN USTUM. Dried Alum.

Heat the Alum in a porcelain capsule till it liquefies; raise and continue the heat, not allowing it to exceed 400°, till aqueous vapours cease to be disengaged, and then reduce the residue to powder.

100 parts of Alum yield 55 parts of dried Alum.

For external use only. Escharotic, used to remove fungous flesh.

(In all the Pharmacopœias.)

Not Officinal.

ALUM CATAPLASM.—Alum, 60 grs.; the whites of two eggs.

ALUM GARGLE.—Alum, 1; Honey, 2; water, 6: mix. Middlesex Hospital.

ALUM WHEY.—Alum, 120 grs. in a pint of milk.

IRON ALUM, composed of Sulphate of Iron and Ammonia, is especially useful in bleeding from the kidneys; it arrests the hæmorrhage and remedies the anæmia that accompanies it.

AMMONIACUM.

AMMONIACUM.

A gum-resinous exudation from the stem of *Dorema Ammoniacum*, in tears and masses. Collected in Persia and the Punjaub.

Contained in Emplastrum Galbani, and in Pilula Scillæ Composita, Pil. Ipecacuanhæ et Scillæ.

Medicinal Properties.

Antispasmodic, stimulant, expectorant, in chronic catarrh, bronchitic affections, and asthma, either in mixture or in pill.

(In all the Pharmacopœias.)

Dose.—10 to 20 grs.

Preparations.

EMPLASTRUM AMMONIACI CUM HYDRARGYRO. *See* HYDRARGYRUM.

As the value of this preparation depends chiefly upon the Mercury it contains, the formula is given under Hydrargyrum.

MISTURA.

Ammoniac, $\frac{1}{4}$ oz., rubbed down with water, 8 oz. and strain =(1 in 32).

(Same as Brit. 1864, Lond. Dub. and U. S.; not in others.)

Dose.—$\frac{1}{2}$ to 1 oz. as an expectorant; may be combined with 15 minims of Tincture of Squills.

AMMONIUM.

AMMONIUM.

NH_4; eq. 18.

Ammonium is the name given to the hypothetical compound metallic base of the Ammonia Salts. It has never been isolated, and it does not seem to be able to exist in an uncombined state.

The reasons for assuming its existence are many. It is capable of replacing the simple metals in most of their combinations, and its compounds present many analogies to those of Potassium. It also forms, under certain circumstances, a very bulky amalgam with Mercury, which, however, soon breaks up into Mercury, Ammonia, and Hydrogen. Its oxide, NH_4O, does not appear to have been separated; but Hofmann has obtained several bodies having exactly this composition, in which all the atoms of Hydrogen are replaced by certain organic radicals. These bodies are almost as powerful alkalies as Potash itself, are free from odour, and furnish perhaps the best arguments in favour of the Ammonium theory.

The Ammonium Salts must for the most part, be looked upon as Salts of Ammonium in which this compound plays the part of a metal, and on this account the terms Chloride of Ammonium, etc., have been substituted for those formerly used, such as Muriate of Ammonia. The following formulæ will explain the change:—

Muriate of Ammonia,	Chloride of Ammonium.
NH_3HCl.	NH_4Cl.

AMMONII BROMIDUM.

NH_4Br, or $\mathbf{NH_4Br}$; eq. 98.

In colourless crystals, which become slightly yellow by exposure to air; sublimes unchanged, does not exhibit a blue colour with mucilage of Starch and Chlorine.

Solubility in water, 1 in $1\frac{1}{2}$; in Rectified Spirit, 1 in 13.

An excellent nervine, good in Hysterics; especially useful for sleeplessness of nervous persons where there is no organic disease; given in Epilepsy when Bromide of Potassium fails.

Dose.—2 to 20 grains.

INCOMPATIBLES.—Acids and Acid Salts, and Sp. of Nitrous Æther.

Not Officinal.

GARGLE.—5 grs. to 1 oz. water for relaxed larynx.

LOZENGES, 2 grains each, are convenient for travellers; dose 1 to 3 lozenges.

AMMONII CHLORIDUM.

CHLORIDE OF AMMONIUM.

Syn. AMMONIÆ HYDROCHLORAS, 1864; AMMONIÆ MURIAS, Edin. Dub.; SAL AMMONIAC.

NH_4Cl, or NH_4Cl; eq. 53·5.

Prepared by sublimation; colourless, inodorous, translucent, fibrous masses, tough and difficult to powder.

Solubility in water, 1 in 3.

Test.—When heated, it volatilizes without decomposition, and leaves no residue.

Medicinal Properties.

Expectorant in chronic bronchitis, alterative in rheumatism, and in scrofulous and syphilitic enlargement of the glands; useful in many cases of neuralgia. Externally as a stimulant and resolvent in indolent tumours.

(In all the Pharmacopœias.)

Dose.—10 to 15 grains in a large glassful of cold water, frequently repeated, allays distressing fits of coughing in Bronchitis.

Not Officinal.

LOTIONS.—1 oz. with 1 oz. Rectified Spirit and 10 oz. water; vinegar is sometimes added.

LOZENGES, 3 grains each, are much resorted to for Bronchitis.

AMMONII IODIDUM, IODIDE OF AMMONIUM.—Similar in action to the Iodide of Potassium, but more active.

Dose.—2 to 5 grs.

AMMONIA.

AMMONIA.

This important compound is chiefly produced artificially, but it exists in some volcanic products, and is discoverable in sea-water. It is found also in putrid urine and in the salts produced by the decomposition of animal matter.

Its history in the form of Sal Ammoniac is very ancient. This salt was manufactured in very early times from soot afforded by the combustion of camels' dung, from which it was obtained by sublimation. The process was chiefly conducted in the neighbourhood of the temple of Jupiter Ammon in Egypt, and to this circumstance it owes its name; it was afterwards obtained either from putrid urine or by the destructive distillation of animal substances.

The chief source at present is the liquor from the gas-works, but the Ammonia produced in this way is apt to contain impurities, particularly the organic bases known as "the compound Ammonias."

The purest form of Ammonia is that obtained as a bye-product in the manufacture of Borax. The Boracic Acid of Tuscany, when saturated with Soda, evolves very considerable quantities of pure Ammonia, and the Liquor Ammoniæ and Carbonate of Ammonia, produced in this way, are sold under the names of Volcanic Ammonia, and are to be preferred to all others.

The whole of the Preparations of Ammonia are here grouped.

AMMONIÆ ACETATIS LIQUOR.

ACETATE OF AMMONIA. MINDERERUS SPIRIT.

$NH_4O,C_4H_3O_3$, or $NH_4C_2H_3O_2$ dissolved in water.

Carbonate of Ammonia $3\frac{1}{4}$ or sufficient. Acetic Acid (28 per cent.), 10. Distilled Water, 50.

Dissolve the Carbonate in the Acid, and add the water.

(Same as Lond. and Edin., $\frac{1}{3}$ stronger than Dub., and only $\frac{1}{5}$ of the strength of Brit. 1864.)

Should be made with Volcanic Ammonia, and rendered neutral to test-paper by the addition of either ingredient.

Medicinal Properties.

Diaphoretic and refrigerant. Internally, it increases the secretion by the skin and kidneys, therefore useful in febrile and inflammatory diseases, and is dysmenorrhœa. Externally, in the proportion of 1 to 10 water, as a collyrium in chronic ophthalmia, mixed with weak spirit for a cooling lotion.

Dose.—2 to 6 drms.

INCOMPATIBLES.—Acids; Potash, Soda, and their Carbonates, Lime Water, Salts of Lead, Silver, and Metallic Sulphates.

AMMONIÆ BENZOAS.

BENZOATE OF AMMONIA.

$NH_4O,C_{14}H_5O_3$, or $NH_4C_7H_5O_2$, eq. 139.

In colourless laminar crystals.

Solution of Ammonia, 3 or a sufficiency; Benzoic Acid, 2; distilled water, 4: dissolve and evaporate, keeping the Ammonia in slight excess, and set aside to crystallize, when $3\frac{1}{2}$ of Ammonia is used it makes a neutral salt.

Solubility of the neutral salt, 1 in 5 of water; in Rectified Spirit, 1 in 12.

(Same as Brit. 1864; Fr. Benzoate d'Ammoniaque.)

Test.—When heated, it sublimes without residue.

Medicinal Properties.

Diuretic, employed in dropsy, and in gout when chalk-stones are deposited near the joints. It is more soluble than Benzoic Acid, and therefore acts more quickly. Is valuable in catarrhus vesicæ with alkaline urine, also in cases of phosphatic deposit. Benzoic Acid, when taken into the body, appears to take up Glycocol and form Hippuric Acid. The Ammonia does not, like Potash and Soda, pass through the kidneys.

Dose.—10 to 20 grs. in water.

INCOMPATIBLES.—Persalts of Iron, Liquor Potassæ, and Acids.

AMMONIÆ CARBONAS.

CARBONATE OF AMMONIA.

Sesquicarbonate of Ammonia, $2\,NH_4O,3CO_2$, 118, or $N_4H_{16}C_3O_8$, 236.

In translucent crystalline masses; volatile and pungent.

Sublimed from a mixture of Chalk and Sal Ammoniac.

Solubility in water, 1 in 4; in spirit, sparingly.

Test.—59 grains dissolved in an ounce of distilled water are exactly neutralized by 1000 grain-measures of the volumetric solution of Oxalic Acid; 15 grains are neutralized by 17 grains of Citric Acid, or a tablespoonful of Lemon Juice. Volatilizes entirely when heated.

Medicinal Properties.

Antacid, stimulant, sudorific, and expectorant. Frequently combined with Ipecacuanha in bronchitis. Rarely as an emetic in ½ drm. doses.

(In all the Pharmacopœias. Edin. and U. S. Am. Carb.; Lond. and Dub. Am. Sesquicarb.; Aust. Belg. Pr. Ammoniacum Carbonicum; Fr. Carbonate d'Ammoniaque.)

Dose.—3 to 10 grs.

INCOMPATIBLES.—Acids, Acidulous Salts, Earthy Salts, and Lime Water.

Preparations.

SPIRITUS AMMONIÆ AROMATICUS. SP. SAL VOLATILE. Sp. g. ·870.

Carbonate of Ammonia, 8 oz.; strong solution of Ammonia, 4 oz.; Volatile Oil of Nutmeg, 4 drms.; Oil of Lemon, 6 drms.; Rectified Spirit, 6 pints; water, 3 pints: distil 7 pints.

Or in parts, thus:—16, 8, 1, 1½, 240, 120: distil 280.

This is a great improvement on the London process; it contains a larger quantity of Carbonate of Ammonia, and does not change in colour by keeping; moreover, it has a most agreeable flavour, and is in the most preferable form as an antacid.

(Same as Brit. 1864; Edin. and Dub. a solution of pure Ammonia; U. S. with Carbonate and double the quantity of pure Ammonia; Belg. a mixture; Fr. Alcoolatum Aromaticum Ammoniacale, with Carbonate; not in others.)

A domestic remedy for nervous headache, combined with Spirit of Chloroform.

Dose.—20 to 60 minims in camphor-water.

Contained in Tinctura Guaiaci Ammoniati, Tinctura Valerianæ Ammoniata.

Not Officinal.

LIQUOR VOLATILIS CORNU CERVI, or SPIRIT OF HARTSHORN.—Saturated Solution of Carbonate of Ammonia of the old Pharmacopœias, distilled from Hartshorn.

HARTSHORN AND OIL.—4 of Sp. Hartshorn and 3 of Oil of Almonds: mix.

AMMONIÆ CITRATIS LIQUOR.

SOLUTION OF CITRATE OF AMMONIA.

Citrate of Ammonia, $3\,NH_4O,C_{12}H_5O_{11}$, or $3\,NH_4C_6H_5O_7$, dissolved in water.

Strong solution of Ammonia, 2¾ or sufficient; Citric Acid, 3; distilled water, 20: dissolve the acid in the water, and add the Ammonia until the liquid is neutral to test papers.

(Same as Lond.; not in others.)

Dose.—2 to 6 fluid drms.

AMMONIÆ LIQUOR FORTIOR.

STRONG SOLUTION OF AMMONIA.

Ammoniacal Gas, NH_3, dissolved in water, contains 32·5 per cent.

Test.—Sp. g. ·891. About 1 fluid drachm (52·5 grains by weight) requires for neutralization 1000 grain-measures of the volumetric solution of Oxalic Acid. When diluted with four times its volume of distilled water it does not give precipitates with solution of Lime, Oxalate or Hydrosulphuret of Ammonia, or Ammonio-Sulphate of Copper, and when treated with an excess of Nitric Acid is not rendered turbid by Nitrate of Silver or by Chloride of Barium,—indicating freedom from carbonates, Lime, metals, sulphides, chlorides, and sulphates.

1 fluid drachm contains 15·83 grains of Ammonia.

(Same as Brit. 1864; Lond. sp. g. ·882, 30 per cent.; Edin. ·880, 30 per cent.; Dub. and U. S. ·900, 26 per cent.; Belg. Ammonia Liquida, ·935, 17 per cent.; Fr. Ammoniaque Liquide, ·923; not in others.)

Contained in Linimentum Camphoræ Compositum.

Best given in the form of Liq. Ammoniæ.

Preparations.

LINIMENTUM AMMONIÆ.

Solution of Ammonia, 1; Olive Oil, 3: mix. =(1 in 4).

A counter-irritant.

(Same as Brit. 1864, and Dub.; Lond. and Edin. are stronger, 1 in 3; Fr. 1 in 9; Pr. and Austr. 1 in 5; Belg. 1 in 10, Fort. 1 in 5; U. S. 1 in 3.)

LIQUOR AMMONIÆ. SOLUTION OF AMMONIA. Sp. g. ·959.

Strong solution of Ammonia, 1; water, 2: mix. =(10 per cent.).

1 fluid drachm contains 5·2 grains of Ammonia.

Medicinal Properties.

Stimulant antacid and antispasmodic; relieves nervous headache, and is useful in pneumonia, bronchitis, and dyspepsia. Counteracts the after-effects of alcohol and delirium tremens. Stimulant in low states of the system, as typhoid forms of fever. Externally (applied to the nostrils) in syncope. On the skin it is a powerful rubefacient, and as an embrocation a counter-irritant in pains and stiffness of joints, etc.

Dose.—10 to 20 minims in some bland fluid.

(Same as Brit. 1864, Lond. and Edin.; Dub. ·950; Austr. Ammonia Pura Liquida, ·960, 10 per cent.; Pr. Ammoniacum Causticum Solutum, ·960, 10 per cent.; U.S. Aqua Ammoniæ, ·960;—Belg. and Fr. Liq. Amm. Fort. only.)

SPIRITUS AMMONIÆ FŒTIDUS.

FETID SPIRIT OF AMMONIA.

Strong solution of Ammonia, 2; Assafœtida in small pieces, $1\frac{1}{2}$; Rectified Spirit, sufficient: macerate the Assafœtida in 15 Spirit twenty-four hours, distil, add the distillate to the Ammonia and make up with Spirit to 20.

Dose.—$\frac{1}{2}$ to 1 drachm.

(Same as Edin. and Dub.; Lond. a Carbonate.)

INCOMPATIBLES.—Acids, and acidulous salts.

Not Officinal.

TINCT. AMMON. COMP. P.L.—EAU DE LUCE.—Mastic, 2 drs.; Rectified Spirit, 9 drs.; Ol. Lavand., 14 min.; Strong Liquor Ammoniæ, 20 oz.: dissolve. Stimulant, antispasmodic.

Dose.—5 to 10 minims.

AMMONIÆ PHOSPHAS.

PHOSPHATE OF AMMONIA.

$2NH_4O,HO,PO_5$; or $(NH_4)_2HPO_4$; eq., 132.

In colourless transparent prisms, which, upon exposure to air, lose Water and Ammonia, and become opaque.

Solubility in water, 1 in 2; insoluble in Rectified Spirit.

Strong solution of Ammonia, 8; diluted Phosphoric Acid, 20: add the Ammonia to the Acid until it is alkaline, then evaporate by a gentle heat, and crystallize.

Test.—If 20 grains be dissolved in water, and the solution of Ammonio-sulphate of Magnesia be added, a crystalline precipitate falls, which, when well washed upon a filter with solution of Ammonia diluted with an equal volume of water, dried, and heated to redness, leaves 16·8 grains. The crystalline precipitate is the Ammonio-phosphate of Magnesia, and when this is heated to redness the Ammonia is driven off, and the Phosphate of Magnesia is left.

(Brit. 1864 and Belg.; not in other Pharmacopœias.)

Medicinal Properties.

Given in gout and rheumatism to render the urates of soda and lime soluble. Of great value in cases of Uric Acid calculus.

Dose.—5 to 20 grs. 3 or 4 times a day in water.

AMYGDALA AMARA.

BITTER ALMONDS.

The seed of the bitter almond tree, brought from Mogadore.

Introduced only for expressing the oil from it.

(Lond. and Edin.)

Not Officinal.

MISTURA AMYGDALÆ AMARÆ.—Made in the same proportions as Mistura Amygdalæ.

Useful in cough, and as a lotion to allay itching of the skin. It was a favourite vehicle for giving tartarized Antimony, in doses of $\frac{1}{8}$ grain to subdue inflammatory action of the lungs and relieve cough. As the mixture contains a variable amount of Prussic Acid, its use requires caution.

AMYGDALA DULCIS.

JORDAN ALMONDS.

The seed of the sweet almond tree, *Amygdalus communis*, cultivated about Malaga.

Test.—Not bitter nor evolving the odour of Bitter Almonds when bruised with water.

Medicinal Properties.

Demulcent; useful in catarrhal affections. Dr. Pavy has proposed as a substitute for bread or starchy food for diabetic patients, cakes made of Sweet Almonds, and these are at present sold.

(Both Bitter and Sweet Almonds are contained in all other Pharmacopœias.)

Preparations.

MISTURA.

Compound powder of Almonds, 1; water, 8: triturate and strain.
=(1 in 8).

A vehicle for cough medicines.

(Same as Brit. 1864, Lond. and Dub.; Edin. 1 in 20; U.S. 1 in 9; Fr. Emulsio Simplex; not in others.)

Dose.—1 to 2 oz.

OLEUM.

The oil obtained by pressure from either Bitter or Sweet Almonds.

Dose.—2 to 4 drms.

Contained in Unguentum Cetacei; Unguentum Simplex. Used in preference to Olive Oil, as it makes a whiter Ointment.

(In all the Pharmacopœias.)

PULVIS COMPOSITUS.

Blanched Jordan Almonds, 8; Refined Sugar, 4; Gum Arabic, 1: rub the almonds into a paste, then add the sugar and gum previously mixed.

Dose.—60 to 120 grs.

A new name to an old preparation.

(Lond. Confectio Amygdalæ; Edin. Conserva Amygdalarum; not in others.)

AMYLUM.

WHEAT STARCH.

Starch procured from the seed of common wheat. In white columnar masses, which become blue with a solution of Iodine.

Medicinal Properties.

A good application to the face and hands, when affected by cutaneous eruptions. In the form of violet powder, which is merely scented starch, it is useful to prevent the low inflammation that may be caused by the chafing of the skin of fat infants.

(In all the Pharmacopœias; Fr. Amidon.)

Preparations.

GLYCERINUM AMYLI. PLASMA.

Starch, 1; Glycerine, 8. (By weight 1 in 11, by measure 1 in 9.)

Rub them well together, then heat the mixture gradually to 240°, constantly stirring until a translucent jelly is formed.

(Fr. Glycérée Amidon, by weight 1 in 16.)

MUCILAGO.

Starch, 1; distilled water, 40: boil, with stirring, for a few minutes.
=(1 in 40).

Used in enemas, either in large quantity as a vehicle for purgatives, or in small quantity for sedatives or astringents which are to be retained and absorbed. As an enema *per se*, it is soothing and slightly astringent, and is useful in typhoid fever, when the object is rather to regulate than arrest the diarrhœa. It is used extensively to stiffen bandages for fractures, etc.

(Same as Brit. 1864, Lond. and Edin.; Dub. 1 in 20; Belg. 1 in 25; not in others; Lond. and Belg. Decoctum.)

Not Officinal.

AMYLUM IODATUM, *Belg.*—Iodine, 1; Starch, 10; Alcohol, 10. Dissolve the Iodine in the Alcohol: mix gradually the starch by rubbing in a glass mortar; moisten the mixture with a little cold water, place it in a bolt-head surrounded by hot water for two or three hours, shaking occasionally; when cold, wash with weak alcohol, and dry with gentle heat.

ANETHI FRUCTUS.

DILL FRUIT.

The fruit of *Anethum graveolens*, cultivated in Britain or imported from Southern Europe.

Medicinal Properties.

Stimulant, aromatic, and carminative: chiefly given to children in cases of flatulency.

(Lond. and Edin.; Fr. Aneth; not in others.)

Preparations.

AQUA.

Bruised fruit, 1; water, 20; distil, 10. =(1 in 10).

(Brit. 1864, 1 in 8; Lond. and Edin. 1 in 9; not in others.)

Dose.—½ to 1 oz.

OLEUM.

The oil distilled in Britain from the fruit. Sp. g. ·977 to ·990.

(Brit. 1864, and Lond.; not in others.)

Dose.—1 to 4 minims, on sugar.

ANISI OLEUM.

OIL OF ANISE.

The oil distilled in Europe from the fruit of the *Pimpinella Anisum*, or from the fruit of the *Illicium Anisatum*, Star Anise, imported from China.

Test.—Concretes at 50° F.

Medicinal Properties.

Stimulant, aromatic, and carminative: used to relieve flatulence, and to diminish the griping of purgative medicines.

(In all the Pharmacopœias except Edin.)

Dose.—1 to 4 minims, on sugar.

Contained in Essentia Anisi 1 in 5, Tinctura Camphoræ Comp., and Tinctura Opii Ammoniata.

ESSENTIA.

Oil of Anise, 1; Rectified Spirit, 4: mix. =(1 in 5).

(Dublin 1 in 10.)

Dose.—10 to 20 minims.

ANTHEMIDIS FLORES.

CHAMOMILE FLOWERS.

The dried flowers of the *Anthemis nobilis*, single and double, wild and cultivated.

Medicinal Properties.

Tonic, aromatic, and stomachic. In large doses, emetic. Useful in atonic dyspepsia.

(In all the Pharmacopœias.)

Preparations.

EXTRACTUM.

Chamomile Flowers, 1 lb.; Oil of Chamomile, 15 minims; distilled water a gallon: boil the Chamomile in the water till the volume is reduced to one-half, then strain, press, and filter; evaporate the filtered liquor by a water bath to a pill consistence, adding the Oil of Chamomile at the end of the process.

(Brit. 1864, with cold water; same as Edin. without oil; Austr. with spirit; not in others.)

Dose.—2 to 10 grs.

INFUSUM.

Chamomile Flowers, ½ oz.; boiling water, 10 oz.: infuse for fifteen minutes. =(1 in 20).

Dose.—As a stomachic, 1 to 3 oz., as an emetic, 5 to 10 oz.

(Same as Brit. 1864; Dub. 1 in 24; Lond. and Edin. 1 in 32; Fr. 1 in 200; not in others.)

OLEUM.

Distilled in Britain from the flowers.

(In all the Pharmacopœias except Edin. Dub. U. S.)

Dose.—2 to 4 minims.

Stimulant and carminative. Prescribed in pills with rhubarb or other powder.

ANTIMONIUM.

ANTIMONY.

Sb; eq. 122.

Of a silvery-white colour, brittle and crystalline.

This metal rarely occurs native, but generally as the black sulphuret, the Stibium of the ancients. It was first made known in the metallic state by Basil Valentine towards the end of the fifteenth century. It is prepared on the large scale by roasting the sulphuret (mixed with charcoal to prevent caking) until it is converted into oxide, which is then reduced by means of charcoal and carbonate of potash. It is extensively employed in the manufacture of type-metal and the alloy known as Britannia metal. It melts at about 800° F., and as the ingot cools its surface has a beautiful stellated appearance; the alchemist considered this star as a mysterious guide to the secrets of transmutation. It is volatile at a white heat.

ANTIMONII OXIDUM.

OXIDE OF ANTIMONY.

Teroxide of Antimony, SbO_3, eq. 146; or Sb_2O_3, eq. 292.

A white powder, fusible at a low red-heat.

Prepared by decomposing a solution of Terchloride of Antimony with Carbonate of Soda.

Test.—Does not yield any sublimate when fused in a test-tube; dissolves entirely when boiled with an excess of Acid Tartrate of Potash. Indicating absence of Arsenic, and other impurities.

Medicinal Properties.

Diaphoretic. Less active than the tartrate.

Dose.—1 to 3 grs. in a pill.

(Same as Brit. 1864, Edin. Dub. U. S. and Fr. par précipitation; Belg. Antimonium Depuratum; Austr. Antimonium Oxidatum; Pr. Stibium Oxydatum; not in Lond.)

Preparation.

PULVIS ANTIMONIALIS.

Oxide of Antimony, 1; precipitated Phosphate of Lime, 2: mix=(1 in 3).

Dose.—2 to 6 grs.

(Same as Brit. 1864, and Fr. Poudre Antimoniale de James; Lond. Edin. and Belg. by calcination; Dub. by precipitation; not in Pr. and Austr.)

Introduced as a substitute for the celebrated James's Fever Powder. The analyses which have been made from time to time of James's Powder do not indicate anything very mysterious in its composition. It appears to consist mainly of Antimonious Acid, Phosphate of Lime, and perhaps a little Oxide of Antimony. We cannot suppose that there is any chemical combination between the Phosphate of Lime and the Antimonious Acid. It is probably a mere mixture of the two, and if so, it is difficult to see what part the Phosphate of Lime plays in its medicinal action. It is by no means established that the patent medicine is superior to the preparation of the London Pharmacopœia, and it is a question whether some definite antimonial compound like the potassio-tartrate is not superior to such empirical mixtures as James's Powder and its imitations. It is surely only a relic of past ages to go on in this way. If the object be to imitate James's Powder, the preparation of the British Pharmacopœia is further off than ever, as it contains Oxide of Antimony, while Antimonious Acid makes up the bulk of the quack medicine. But it may perhaps be a better preparation, and might be better still if the Oxide of Antimony, a substance of perfectly definite composition, were made to take the place of these mixtures altogether.

ANTIMONII CHLORIDI LIQUOR.

SOLUTION OF CHLORIDE OF ANTIMONY.

Terchloride of Antimony, $SbCl_3$, eq. 228·5, dissolved in Hydrochloric Acid.

Prepared by boiling Black Sulphuret of Antimony in Hydrochloric Acid. Introduced chiefly for the purpose of preparing the Oxide of Antimony, and is of a yellowish-red colour.

Test.—Sp. g. 1·470. 1 drm. mixed with a solution of ¼ oz. of Tartaric Acid in 4 oz. of water, forms a clear solution, which, if heated with Sulphu-

retted Hydrogen, gives an orange precipitate, weighing, when washed and dried at 212° F., at least 22 grs. (Golden Sulphuret of Antimony.)

(Same as Brit. 1864, and Dub.; called Butyrum Antimonii in Austr. sp. g. 1·35; Belg. sp. g. 1·44; Beurre d'antimoine, Fr.; not in Lond. Edin. and U.S.)

Medicinal Properties.

A caustic; it usually acts without causing much pain or inflammation, and after the separation of the eschar forms a clean healthy ulcer. Sometimes applied to cancerous growths. Never used internally.

ANTIMONIUM NIGRUM.

BLACK ANTIMONY.

Syn. Prepared Sulphuret of Antimony.

Native Sulphide of Antimony, SbS_3, or Sb_2S_3, purified from Siliceous matter by fusion, and afterwards reduced to fine powder.

Dissolves entirely in Hydrochloric Acid, evolving Sulphuretted Hydrogen.

Used only to procure Sulphuretted Hydrogen, and to make Antimonium Sulphuratum and Liquor Antimonii Chloridi.

ANTIMONIUM SULPHURATUM.

SULPHURATED ANTIMONY.

Syn. Antimonii Oxysulphuretum, Lond.; Antimonii Sulphuretum Aureum, Edin.; Antimonii Sulphuretum Præcipitatum, Dub.

Tersulphuret of Antimony, SbS_3, or Sb_2S_3, an orange-red powder, with a small and variable amount of Teroxide of Antimony, SbO_3 or Sb_2O_3.

A bright orange or golden-red powder, without odour and with a slight taste.

Insoluble in water, readily dissolved in caustic Soda; also in Hydrochloric Acid.

Test.—60 grains dissolved in Hydrochloric Acid, and dropped into water, give a white precipitate which, when washed and dried, weighs about 53 grains (Oxychloride of Antimony). When heated with 12 times its weight of Muriatic Acid (sp. g. 1·160) with the aid of heat, it is nearly all dissolved, with the evolution of Sulphuretted Hydrogen. Exposed to heat, it takes fire, and burns with a greenish-blue flame, giving off sulphurous gas; the metal remains as a greyish oxide.

(Lond. Antimonii Oxysulphuretum; Edin. Antimonii Sulphuretum Aureum; Dub. Antimonii Sulphuretum Præcipitatum; U.S. Antimonium Sulphuratum; Fr. Austr. Belg. Pr. Stibium Sulphuratum Aurantiacum.)

Medicinal Properties.

Alterative, diaphoretic, and emetic; uncertain in action from its slight solubility, depending on the acidity of the stomach. Usually prescribed with Calomel and Guaiacum, as in Pilula Hydrargyri Subchloridi Composita, for

secondary syphilis and cutaneous eruptions; or with Henbane or Hemlock in chronic rheumatism.

Dose.—1 to 5 grs. in pill.

Contained in Pilula Hydrargyri Subchloridi Composita.

ANTIMONIUM TARTARATUM.

TARTARATED ANTIMONY.

In colourless transparent crystals, exhibiting triangular facets.

Tartrate of Antimony and Potash, $SbO_3,KO,C_8H_4O_{10}+2HO$, or $KSbC_4H_4O_7H_2O$, eq. 343.

A double salt, being a Tartrate of Antimony and Tartrate of Potash, with two equivalents of water.

Oxide of Antimony, 5; Acid Tartrate of Potash, 6; distilled water, 40. Dissolve and crystallize.

Solubility: in cold water, 1 in 20; in boiling water, 1 in 2; partially soluble in proof spirit; insoluble in alcohol.

Test.—20 grs. dissolves without residue in a fluid ounce of distilled water at 60° F., and the solution gives with Sulphuretted Hydrogen an orange precipitate which, when washed and dried at 212° F., weighs 9·91 grs. (Golden Sulphuret of Antimony.)

Medicinal Properties.

Diaphoretic, expectorant, depressant, and emetic. Relieves the chest in pneumonia and in bronchitis. In continued small doses it relaxes, and causes increased secretion from the mucous membranes and skin, and is a *depressant* to the whole vascular system.

As a febrifuge, it is given either in aqueous solution, or as Vinum or Pulvis Antimonialis. In repeated small doses it is used in midwifery in cases of rigidity of the os uteri, or heat and dryness of the passages.

Externally, in the form of ointment, it acts as a powerful irritant to the skin, producing a pustular eruption. Is used as a counter-irritant for children: it should, however, be applied with great caution, both on account of its highly irritant properties, and its liability to be absorbed into the system.

Dose.—As a diaphoretic, $\frac{1}{16}$ to $\frac{1}{6}$ gr.; as a depressant, $\frac{1}{6}$ to 1 gr.; as an emetic, 1 to 2 grs.

(Same as Brit. 1864; Lond. Antimonii Potassio-Tartras; Edin. Dub. Belg. Antimonium Tartarizatum; Austr. Kali Stibiato-Tartaricum; Pr. Stibio-Kali Tartaricum; Fr. Tartrat de Potasse et d'Antimoine; U. S. Antimonii et Potassæ Tartras.)

INCOMPATIBLES.—Gallic and Tannic Acids, Alkalies and Lead Salts.

ANTIDOTES.—In case of poisoning by Tartar Emetic, the antidotes are, Tannic Acid, Catechu, vegetable astringents.

Preparation.

UNGUENTUM.

Tartarated Antimony in fine powder, 1; simple ointment, 4: mix. =(1 in 5).

(Same as Brit. 1864, and Lond. Ung. Antimonii Potassio-Tartratis; Edin. Ung. Antimoniale; and U. S. Austr. Pr. Ung. Stibio-Kali Tartarici; Dub. Ung. Antimonii Tartarizati, 1 in 8; Fr. Pommade Stibiée, 1 in 4; Belg. Ung. Tartari Stibiati, 1 in 8.)

VINUM ANTIMONIALE.

Tartarated Antimony, 2 grs.; Sherry, 1 oz. =(1 in 240).

Note.—The Tartarated Antimony does not dissolve in the Sherry readily; it is better to dissolve it in about ten times its weight of hot water, and then add the wine.

Each fluid drachm contains ¼ gr.

(In all the Pharmacopœias, and of the same strength; Lond. Vinum Antimonii Potassio-Tartratis; Edin. Vinum Antimoniale; and Fr. Vin Antimonié; all with Sherry; U. S. Vinum Antimonii; Dub. Liq. Ant. Tartarizati, with weak spirit; Pr. Vinum Stibiatum, with white French Wine; Austr. V. Stibiato-Tartaricum; Belg. V. Antimoniatum; with Malaga wine.)

Dose.—10 to 60 minims as a diaphoretic in saline mixtures.

AQUA.

WATER.

The Pharmacopœia orders the purest Water that can be obtained, cleared, if necessary, by filtration. It must be remembered that water obtained in different localities varies much in respect to its purity, and that what is *actually dissolved* in it cannot be separated by filtration alone.

The purest water is from the Wenham Lake ice and the Norwegian ice. After these may be taken Distilled Water and snow-water. Rain-water contains about a millionth part of Ammonia, and probably about the same amount of Chloride of Sodium. The following table will show how great a difference exists in the quantity of Lime and saline matters dissolved in various natural waters:—

Loch Katrine, supplying Glasgow,	contains	2 grs. in the gallon.
River Dee, „ Aberdeen,	„	4 „
„ Tay, „ Perth,	„	5 „
Water supplied to Liverpool	„	5 „
Claremont water	„	5·7 „
Farnham, in Surrey	„	7·25 „
Thames, supplying London	„	19 to 22, according to locality.
Water supplied to Watford	„	22·75 „
Spring water	„	40 to 60 „
River Jordan	„	75 „
Sea-water, shores of the Baltic	„	1100 „
„ Frith of Forth	„	2100 „
„ off Boulogne	„	2240 „
„ German Ocean	„	2380 „
„ open Atlantic, Canaries	„	2450 „
„ English Channel, near Havre		2520 „
„ „ Bayonne	„	2660 „
„ Mediterranean, Marseilles	„	2870 „
Dead Sea water (sp. g. 1·211)	„	17200 (Marcet).

Professor Clark, of Aberdeen, invented a soap test, made by dissolving 1 oz. of white curd soap in 1 gallon of proof spirit, to ascertain the amount of Lime in water; and proposed a method of softening all waters impregnated with Carbonate of Lime, held in solution by Carbonic Acid, by adding just so much lime-water as is capable of uniting with the Carbonic Acid. The whole of the Carbonate of Lime in the water as well as that produced by the action of the Carbonic Acid upon the lime-water added, is precipitated, leaving the water comparatively pure. By this process three-fourths of the hardness of water is removed. Care, however, must be taken not to add more lime-water than is just sufficient for the purpose, otherwise this agent will contaminate the water. For further particulars the reader is referred to the 'Pharmaceutical Journal,' vol. vi. p. 526.

The Thames water, when supplied for long voyages, after being kept in tanks about four months, undergoes a kind of fermentation, which lasts for a few weeks, and after this change the water becomes bright, pleasant to drink, and will keep for months or years without further change, a property which scarcely belongs to any other river water.

AQUA DESTILLATA.

Purest water distilled through a block-tin worm, rejecting the first portion that comes over.

Distilled water has, when freshly drawn, an unpleasant odour, which is removed by passing it through a charcoal filter, or by exposing it to air, but Carbonic Acid is in that case absorbed by it, and Subacetate of Lead will then render it milky. If water is distilled through leaden pipes, it becomes impregnated with lead; the same is the case with natural soft water passing through leaden pipes. The royal buck-hounds were poisoned at Ascot from this cause. Zinc wire reaching the whole length of the column of water so impregnated displaces the Lead. Water containing Sulphate of Lime seems less likely to become impregnated with Lead than that containing the Chlorides.

The Officinal Waters which were in the former Pharmacopœias and omitted in the present, are:—Aqua Ammoniæ Carbonatis, Aqua Anisi, Aqua Cassiæ, Aqua Calcis (now Liquor Calcis), Aqua Chlori (now Liquor Chlori), Aqua Potassæ Effervescens, Aqua Sodæ Effervescens (now Liquores).

The Waters of the British Pharmacopœia, which are all distilled, except Aq. Camphoræ, are as follow; the formulæ are given under the names of the substances from which they are prepared. All these have been in previous Pharmacopœias, except Aq. Laurocerasi, which was not in Lond.

Page 32.	AQUA ANETHI. From the dried fruit.	Dose, ½ to 1 oz.
44.	AQUA AURANTII FLORIS. From the flowers. Imported.	½ to 1 oz.
62.	AQUA CAMPHORÆ. (Formerly Mistura Camphoræ.)	1 to 2 oz.
70.	AQUA CARUI. From the dried fruit.	1 to 2 oz.
84.	AQUA CINNAMOMI. From the bark.	½ to 1 oz.
38.	AQUA DESTILLATA.	
121.	AQUA FŒNICULI. From the dried fruit.	1 to 2 oz.
148.	AQUA LAUROCERASI. From fresh leaves.	5 to 30 min.

Page 163.	AQUA MENTHÆ PIPERITÆ. With oil and distilled.	1 to 2 oz.
164.	AQUA MENTHÆ VIRIDIS. With oil and distilled.	1 to 2 oz.
184.	AQUA PIMENTÆ. From the dried unripe berries.	1 to 2 oz.
211.	AQUA ROSÆ. From the fresh petals.	½ to 1 oz.
215.	AQUA SAMBUCI. From the fresh flowers.	½ to 1 oz.

It was thought proper in former Pharmacopœias to add spirit to the several distilled Medicated Waters to preserve them from change, but Mr. Warington has shown, by experiment, that this is an error. He kept bottles of Dill and Anise Waters with and without spirit for two years, and found that those without spirit kept well, whilst those with spirit had become acidified by the spirit changing into Acetic Acid.

ARGENTUM.

SILVER.

Ag; eq. 108.

A white, malleable, ductile, and tenacious metal, bears a brilliant polish, and is soft when pure. It has a sp. g. of 1·050. It is one of the most ancient metals, the Luna or Diana of the alchemists. It occurs native, sometimes arborescent, sometimes in masses; it is seldom, however, pure. The mines of Peru and Mexico are the richest. The mines of Saxony, Bohemia, Swabia, and Kongsberg in Norway, are the richest in Europe. It has been found in Cornwall and Devonshire. It is found as a sulphuret. It is readily acted on by Sulphuretted Hydrogen.

Soluble in Nitric Acid.

ARGENTI NITRAS.

NITRATE OF SILVER.

AgO,NO_5; or $AgNO_3$; eq. 170.

In colourless tabular right rhombic prisms, or in white cylindrical rods.

Solubility, 100 grains in 50 minims water, measuring 80 minims.

It is stated by Brande, Garrod, and Ure, that this salt is soluble in its own weight of water at 60° F., and in half its weight at 212°, but the Author finds that it is soluble in half its weight of water at 60° F.

Test.—10 grains dissolved in 2 fluid drachms of distilled water give, with Hydrochloric Acid, a curdy, white precipitate (Chloride of Silver), which, when washed and thoroughly dried, weighs 8·44 grains, soluble in a solution of Ammonia—indicating the proper amount of metal. The filtrate, when evaporated by water bath, leaves no residue—indicating absence of impurities. Nitrate of Silver may be adulterated with Nitrate of Soda or Potash, and these, of course, will remain after the Chloride of Silver has been precipitated and removed.

(In all the Pharmacopœias.)

Medicinal Properties.

Tonic and antispasmodic. It is considered a reliable remedy in epilepsy, though its *modus operandi* is not perfectly understood. It is said to produce most good in this disease when it acts upon the bowels. It is useful in chorea and angina pectoris, as well as in chronic diseases of the stomach accompanied with pain and vomiting. In typhoid fever, for inflammation and ulceration of the ileum, in pills, dose $\frac{1}{4}$ to $\frac{1}{2}$ grain; if diarrhœa be the principal symptom, an injection of 3 or 4 grains to 6 fluid ounces of water is useful to promote cicatrization of internal ulcers. The discoloration of the skin occasioned by its use is first indicated by a dark line on the edges of the gums. This is said to be removed by a steady course of Potassæ Bitartras. Externally to poisoned wounds, pustules, ulcers, and erysipelatous inflammations; also as a collyrium for ulcers of the cornea and aphthous affections of the mouth: it is an excellent application for sore nipples. Dr. Gibb employs 30 to 40 grains to the ounce to inject on the larynx; 10 grains to the ounce is used to sponge a relaxed throat, or 20 grains to the ounce for diphtheria; 2 to 4 grains to the ounce is employed for lotions or injections.

Swollen chilblains are sometimes painted with a strong solution of nitrate of silver. Prescribed in pills with crumb of bread.

Dose.—$\frac{1}{6}$ to $\frac{1}{3}$ gr. or more.

Incompatibles.—The Alkalies and the Chlorides, and Hydrocyanic Acid.

Mild Caustic Points, made by fusing Nitrate of Potash in various proportions with Nitrate of Silver, are used by oculists and others; thus—

No. 1	consists of	1	Nitrate of Silver and	2 of Nitrate of Potash.
2	„	1	„	3
3	„	1	„	$3\frac{1}{2}$
4	„	1	„	4

Antidotes.—In case of poisoning by Nitrate of Silver, the antidote is Solution of Common Salt, given in some demulcent drink.

ARGENTI OXIDUM.

OXIDE OF SILVER.

AgO, eq. 116; or Ag_2O, eq. 232.

A dark olive-brown powder, insoluble in water, but soluble in Nitric Acid.

Test.—When heated to redness, 116 parts leave 108 of pure Silver. It is dissolved by Nitric Acid, and precipitated by Chloride of Sodium; the supernatant liquor ought not to be discoloured by Sulphide of Ammonium;—indicating absence of copper.

(Brit. 1864, Dub. and U. S.; not in other Pharmacopœias.)

Medicinal Properties.

It has the general therapeutic qualities of the Nitrate, without its escharotic effect, and, as it is said, without discolouring the skin. A valuable astringent in hæmorrhages.

Dose.—$\frac{1}{2}$ gr. to 2 grs. in form of pill.

If prescribed with Creasote in pills, the oxide must be first diffused through some simple powder, or the heat produced in rapidly reducing the Silver causes the mass to become red-hot, or to explode.

ARGENTUM PURIFICATUM.

PURE SILVER.

Test.—If Ammonia be added in excess to a solution of the metal in Nitric Acid, the resulting solution exhibits neither colour nor turbidity; used only to prepare Nitrate of Silver.

ARMORACIÆ RADIX.

HORSE-RADISH ROOT.

The fresh root of the *Cochlearia Armoracia*, cultivated in Britain.

Its virtues are taken up by water and alcohol. When distilled with alcohol, it yields none of the oil. The root may be kept fresh for some time, if buried in sand in a cool place.

(Brit. 1864, Lond. and Edin.; Fr. Raifort; Belg.; not in others.)

Medicinal Properties.

It is highly stimulant, exciting the stomach, and promotes the secretions, especially that of urine. Used in atonic dyspepsia; also as a sudorific in chronic rheumatism. Externally it is a rubefacient.

Preparation.

SPIRITUS COMPOSITUS.

Fresh Root sliced, 20; dried Orange Peel, 20; Nutmeg, bruised, ½; Proof Spirit, 160; water, 40: mix, and distil over 160. =(1 in 8).

(Same as Brit. 1864, Lond.; not in others.)

Dose.—1 to 3 drms.

Not Officinal.

INFUSUM COMPOSITUM (Lond.).—Fresh Root, sliced, 1; Black Mustard Seed, 1; compound Spirit of Horse-radish, 1; boiling Distilled Water, 20: macerate two hours; strain, and add the spirit.

Dose.—1 to 2 oz. as a warm stimulant. Used also as a gargle for aphonia.

It is found in practice that a temperature of 150° to 180° makes the strongest infusion.

ARNICÆ RADIX.

ARNICA ROOT.

The rhizome and rootlets of the *Arnica montana*, or Leopard's Bane, dried; imported from the south of Europe.

Medicinal Properties.

Stimulant, acting on the brain and the whole nervous system; irritant to the stomach and bowels; peculiarly useful in diseases attended with a debilitated or typhoid state of the system. Used externally for bruises and wounds, and after extraction of teeth to allay pain.

(Same as Brit. 1864; Austr. Belg. root and flowers; U.S. flowers; not in others.)

Preparation.

TINCTURA.

Bruised Root, 1; Rectified Spirit to percolate 20: macerate forty-eight hours with 15 of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, pour on the remaining spirit, let it drain, wash the marc, press, filter, and make up to 20. =(1 in 20).

(Same as Brit. 1864; U. S. 1 in 5; (Belg. 1 in 5: made of the flowers; Austr. 1 in 7, from flowers, by weight;) also a Tincture from the entire fresh plant; not in others.)

Dose.—1 to 2 drms.

Used externally, it should be mixed with an equal quantity of hot water and applied with lint.

The British Pharmacopœia Tincture is much weaker than any other. The root was employed in the place of the flowers on account of its having a distinctive odour. The root and flowers have much the same therapeutic strength.

Not Officinal.

Arnica Opodeldoc.—White Soap, 4; Rectified Spirit, 10; Tincture of Arnica, 5; Camphor, 1. Dissolve by heat, and strain.

ARSENICUM.

ARSENIC.

As; eq. 75.

A bluish-grey metal, of great brilliancy, quickly tarnishing on exposure. It has a sp. g. of 5·884, and volatilizes at 356° F., its fumes having the odour of garlic.

It is found in most countries usually combined with other metals. Its oxide is also a natural production, though chiefly found in the flues of furnaces in which various metallic ores are roasted.

See ACIDUM ARSENIOSUM.

ASSAFŒTIDA.

ASSAFŒTIDA.

The gum resin exuded from the excised root of *Narthex Assafœtida*. Procured in Affghanistan and the Punjaub. Imported from Bombay.

It yields all its virtues to alcohol, and forms a clear tincture, which becomes milky on the addition of water.

(In all the Pharmacopœias.)

Medicinal Properties.

It is a moderate stimulant, a powerful antispasmodic, an efficient expectorant, and feeble laxative. Useful in cases of flatulency in the bowels, in hysteric paroxysms, and other kinds of nervous affections; also in some forms of chronic bronchitis. Was recommended by the late Mr. Worms for the Cattle Plague, and with some success.

Dose.—5 to 20 grs.

Contained in Pilula Aloes et Assafœtidæ.

Preparations.

ENEMA.

Assafœtida, 30 grs.; water, 4 oz.: rub the Assafœtida with the water added gradually so as to form an emulsion for one enema.

(Brit. 1864 made with Tinct. and Starch Mucilage; Lond. with decoction of Barley; Edin. with aperients; Dub. 2 drms. to 12 oz. of warm water; not in others.)

PIL. ALOES ET ASSAFŒTIDA, 1 in 4. *See* ALOES. Page 22.

PILULA COMPOSITA. *Syn.* PIL. GALBANI COMP.

Assafœtida, 2; Galbanum, 2; Myrrh, 2; Treacle by weight, 1: melt together in a water bath. =(Assaf. and Galb., of each 1 in $3\frac{1}{2}$).

(Same as Brit. 1864; Edin. Assaf. and Galb. of each 1 in 3; Dub. Assaf. and Galb. of each 1 in 4; U. S. Assafœtida, 3; Soap, 1; not in others.)

Dose.—5 to 10 grs.

SPIRITUS AMMONIÆ FŒTIDÆ, 33 grs. in 1 oz. *See* AMMONIA.

TINCTURA.

Assafœtida (small fragments), 1; Rectified Spirit, 8: macerate seven days, strain, filter, and add spirit to make 8. =(1 in 8).

(Same as Brit. 1864, Lond. Edin. and Dub.; U. S. 1 in $7\frac{3}{4}$; (Austr. Belg. Fr. 1 in 5 by weight;) not in Pr.)

Dose.—$\frac{1}{2}$ drm. to 1 drm.

Prescribed with Aromatic Spirit of Ammonia, or with Mucilage, as the resin separates when mixed with water only. Alone or with Tinct. Valerianæ and Hyoscyamus, in flatulent hysteria. As an injection 2 drms. to $\frac{1}{2}$ oz. water.

ATROPIA.

ATROPIA.

An alkaloid, in colourless acicular crystals, $C_{34}H_{23}NO_6$, or $C_{17}H_{23}NO_3$, eq. 289, obtained from Belladonna Root.

Solubility in water, 1 in 500; in Rectified Spirit, 1 in 8; entirely in pure Ether.

Test.—Its solution in water is alkaline, gives a citrine yellow precipitate with Terchloride of Gold. Leaves no ash when burnt with free access of air.

(Brit. 1864; Austr. Belg. and U.S.; Sulphate of Atropine in the new Pr.; not in others.)

Medicinal Properties.

For external use only. Like Belladonna, it dilates the pupil of the eye. The Unguentum Atropiæ is a much cleaner preparation than Unguentum Belladonnæ.

Preparations.

LIQUOR.

Atropia, 4 grs.; Rectified Spirit, 1 drm.; dissolve and add water, 7 drms.: mix.

Same as Brit. 1864. =(1 in 120).

Each drachm contains half a grain.

Dose.—1 minim.

ANTIDOTES.—In case of poisoning by Atropia, the antidotes are the same as for Belladonna.

This quantity of spirit causes pain when applied to the eyes, but a smaller quantity hardly holds the Atropia in solution. The Sulphate dissolves without the aid of spirit. Neither this solution nor that of the Sulphate keep long without change.

UNGUENTUM.

Atropia, 8 grs.; Rectified Spirit, ½ drm.; Lard, 1 oz.: dissolve the Atropia in the spirit and mix with the Lard. =(1 in 64).

Each drachm contains 1 grain. 30 grains of Ointment may be used at one application.

ATROPIÆ SULPHAS.

SULPHATE OF ATROPIA.

Atropia, 120 grains; distilled water, ½ oz.; dilute Sulphuric Acid, a sufficiency. Mix the Atropia with the water, add the Acid gradually, stirring them together until the Atropia is dissolved and the solution is neutral. Evaporate to dryness at a temperature not exceeding 100°.

Solubility in water, 1 in 4.

LIQUOR.

Sulphate of Atropia, 4 grs.; distilled water, 1 oz.: dissolve.

More suitable for ophthalmic use, being free from spirit.

The solutions of Atropia are very prone to change, and should therefore be always made at the time required. The sulphate dissolves the instant it is put into the water. The Atropia requires the aid of spirit for its solution.

Not Officinal.

Atropine Paper and Atropine Gelatine, in books proposed by Mr. Streatfeild and in bottles of discs by Mr. Ernest Hart, are prepared by the Author, and extensively used by oculists to dilate the pupils of the eye: a small square or disc being introduced between the eye and the lower lid.

AURANTII AQUA FLORIS.

ORANGE-FLOWER WATER.

The distilled water of the flowers of Bitter Orange, *Citrus Bigaradia*, and of Sweet Orange, *Citrus Aurantium*; prepared mostly in France.

Test.—Not coloured by Sulphuretted Hydrogen. Indicating absence of Lead.

(Brit. 1864; Lond. Aurantii Floris Aqua; Edin. U.S. Austr. Fr. Eau Distillée de Fleur d'Oranger; Pr. Aqua Florum Aurantii; not in others.)

Medicinal Properties.

A mild tonic, but chiefly used as a flavouring vehicle.

Dose.—½ to 1 oz.

Preparation.

SYRUPUS AURANTII FLORIS.

Orange-flower Water, 8; Refined Sugar, 48; distilled water, 16, or a sufficiency: heat the Sugar and Water together, strain, and, when nearly cold,

add the Orange-flower Water. When finished should weigh 72 oz., and measure 54 oz. Sp. g. 1·330. =(1 in 7).

(Same as Brit. 1864, Fr. Belg. and U. S.; Pr. 1 in 2; not in others.)

Dose.—1 to 2 drms.

AURANTII CORTEX.

BITTER ORANGE PEEL.

The outer part of the rind of the ripe fruit of the *Citrus Bigaradia*, dried. Imported from the South of Europe.

Medicinal Properties.

It is a mild tonic, carminative, and stomachic; seldom used alone, but a useful addition to Infusions and Decoctions.

(In all the Pharmacopœias.)

Contained in Infusum, Mistura, and Tinctura Gentianæ.

Preparations.

INFUSUM AURANTII.

Bitter Orange Peel, cut small, 1; boiling water, 20. Infuse for fifteen minutes and strain. =(1 in 20).

(Same as Brit. 1864; not in others.)

Dose.—1 to 2 oz.

INFUSUM COMPOSITUM.

Bitter Orange Peel, cut small, ½ oz.; Fresh Lemon Peel, 2 drms.; Cloves, bruised, 1 drm.; boiling water, 20 oz. Infuse for fifteen minutes and strain. =(1 in 40).

(Same as Lond. Edin. and Dub.; not in others.)

Dose.—1 to 2 oz.

SYRUPUS AURANTII.

Tincture of Orange Peel, 1; Syrup, 7: mix. =(1 in 8).

(Brit. 1864; Lond. and Dub., dried peel; Edin., fresh, much the same in strength but liable to ferment; U. S., sweet peel, spirit, and sugar; Belg., peel, water, and sugar; Pr., peel, wine, and sugar; Austr., peel, weak spirit, sugar, and tincture; Fr., fresh orange juice, sugar, and water.)

Dose.—1 to 2 drms.

TINCTURA AURANTII.

Bitter Orange Peel, cut small and bruised, 1; Proof Spirit, 10: macerate for seven days in a closed vessel with occasional agitation, then strain, press, and filter, add sufficient Proof Spirit to make 10. =(1 in 10).

(Same as Brit. 1864, Lond. Edin. and Dub.; Austr. and Belg. 1 in 5 by weight; Pr. with fresh peel; Fr. Alcoolat d'Écorce d'Oranger is a spirit distilled from fresh Orange Peel; not in U. S.)

Dose.—1 to 2 drms.

A much finer-flavoured Tincture is made with fresh Orange Peel and Rectified Spirit.

VINUM.

Wine made in Britain; it is, in fact, the Orange Wine sold in the shops of

grocers and others, containing about 12 per cent. of Alcohol and some free acid.

(Belg. with dried peel and Malaga wine; not in others.)

Introduced to prepare Quinine Wine, also Vinum Ferri Citratis.

BALSAMUM CANADENSE.—*See* TEREBINTHINA CANADENSIS.

BALSAMUM PERUVIANUM.

BALSAM OF PERU.

A Balsam obtained from *Myroxylon Periera* (*Myrospermum* of Sonsonate). It exudes from the trunk of the tree after the bark has been scorched and removed. From Salvador, in Central America.

A reddish-brown or nearly black liquid, translucent in thin films, having a characteristic odour and bitter taste.

Soluble in 5 parts of Rectified Spirit.

Test.—Not diminished in volume when mixed with water.

(In all the Pharmacopœias except Dub.)

Medicinal Properties.

A warm and stimulating tonic and expectorant. Useful in chronic catarrhs, asthma, and other pectoral complaints, and in rheumatism; also to restrain excessive discharges, as gleets, etc. Externally for chronic indolent ulcers and for sore nipples.

Dose.—10 to 15 minims as an emulsion with mucilage or yolk of egg.

Administered diffused in water by means of Sugar and the Yolk of Egg or Gum Arabic.

Not Officinal.

UNGUENTUM.—Balsam, 1; Lard, 7.

An excellent application for sore nipples or cracked lips.

Also Balsam, 1; Resin Ointment, 1: mix. Applied upon cotton-wool for bed-ridden sores.

BALSAMUM TOLUTANUM.

BALSAM OF TOLU.

A Balsam obtained from *Myroxylon Toluifera*. It exudes from the trunk of the tree after incisions have been made in the bark. From Tolu, New Granada.

A soft solid, of a brownish colour and aromatic balsamic odour.

Test.—Entirely dissolved by alcohol and the volatile oils.

(In all the Pharmacopœias except Austr. and Pr.)

Medicinal Properties.

Similar to those of the Balsam of Peru.

Dose.—10 to 20 grs., in the form of Emulsion, with Mucilage and Sugar.

Contained in Tinctura Benzoini Composita.

Preparations.

SYRUPUS TOLUTANUS.

Balsam of Tolu, $1\frac{1}{4}$; Sugar, 32; water, 20: boil the Balsam half an hour, adding water when required; when cold, make up to 16; filter, add sugar, and dissolve. Finished, weighs 48 and measures 36. Sp. g. 1·330.
=(1 in $28\frac{4}{5}$).

(Same as Brit. 1864; same strength as Lond.; Belg. with 5 per cent. spirit; Fr. and Dub. strength undefined; the following are made with Tincture: U. S. 1 in 18; Edin. 1 in 20; Belg. extemporaneous 1 in 20; not in Austr. and Pr.)

Dose.—1 to 2 drms., in cough mixtures.

TINCTURA TOLUTANA.

Balsam of Tolu, 1; Rectified Spirit, 8: dissolve, filter, and make up 8.
=(1 in 8).

(Same as Brit. 1864; Lond. 1 in 20; Edin. Dub. U. S. 1 in 10; (Fr. and Belg. 1 in 5 by weight;) not in Austr. and Pr.)

Dose.—15 to 30 minims, mixed with mucilage or syrup.

BEBERIÆ SULPHAS.

SULPHATE OF BEBERIA.

The Sulphate of an alkaloid,
$C_{35}H_{20}NO_6,HO,SO_3$, eq. 341, or $C_{35}H_{40}N_2O_6H_2SO_4$, eq. 682,
obtained from the bark of the *Nectandra Rodiei* (Bebeeru), the Greenheart tree, growing in British Guiana. In dark-brown thin translucent scales, yellow when in powder, with a strong bitter taste.

Soluble in water, 1 in 80; in spirit, sparingly.

Test.—Entirely destructible by heat. Water forms with it a clear brown solution, which soon spoils by keeping.

Medicinal Properties.

Tonic and antiperiodic, an imperfect substitute for Quinine; sometimes given in menorrhagia.

Dose.—1 to 3 grs. as a tonic; 5 to 10 grs. as an antiperiodic.

(Brit. 1864; not in others.)

BELÆ FRUCTUS.

BAEL FRUIT.

The half-ripe fruit of *Ægle Marmelos*, dried; from Malabar and Coromandel.

In fragments with a brownish-orange dried pulp adhering to the rind.

Medicinal Properties.

Has been much extolled for diarrhœa and dysentery, and is given in combination with Syrup of Red Gum or other astringents.—*See* CATECHU.

Preparation.

EXTRACTUM LIQUIDUM.

Bael, 1; distilled water, 15; Rectified Spirit, $\frac{1}{8}$: macerate for twelve hours in 5 of the water, pour off the liquid, repeat the operation twice for one hour. Press, filter, and evaporate to 1, including the spirit.

A fluid ounce is equal to a solid ounce.

(Brit. 1864; not in others.)

Dose.—1 to 2 drms.

BELLADONNA.

DEADLY NIGHTSHADE.

HERB.

The fresh leaves and branches to which they are attached; also the leaves separate from the branches, carefully dried, of *Atropa Belladonna;* gathered, when the fruit has begun to form, from wild or cultivated plants in Britain.

(Brit. 1864; Lond. Edin. Dub. Belg. and U. S. leaves, fresh and dried; Pr. leaves and branches; Austr. leaves and herb; Fr. leaves and fruit.)

ANTIDOTES.—In case of poisoning by Belladonna, the antidotes are, an emetic of 10 grs. of Sulphate of Copper; afterwards, Opium should be administered in the proportion required, to counteract the effects of the Belladonna.

Medicinal Properties.

Belladonna is a powerful narcotic, possessing diaphoretic and diuretic properties, and is exceedingly valuable in convulsions, neuralgia, hooping-cough, paralysis, and diseases having their seat chiefly in the nervous system. Applied to the eye it causes dilatation of the pupil.

Preparations.

EMPLASTRUM.

Extract of Belladonna, 3; Resin Plaster, 3; Rectified Spirit, 6: rub the Extract and Spirit together in a mortar, and when the insoluble matter has subsided, decant the clear solution, remove the Spirit by distillation or evaporation, and mix the Alcoholic Extract thus obtained with the resin plaster melted at the heat of a water-bath, continuing the heat until with constant stirring the plaster has acquired a suitable consistence: yields only $3\frac{1}{2}$.

The Author, who has suffered much from lumbago, has long since abandoned Belladonna plasters; he finds 7 parts of Linimentum Belladonnæ and 1 part Chloform sprinkled thinly on impermeable piline and applied, relieves in a very short time, and is clean to use, whereas a plaster is at best a disagreeable application and slow in action.

(Similar to U. S. with Alcoholic Extr. 1, Resin Plaster, 2; Brit. 1864, 1 of Extr. in 2; Lond. Edin. and Dub. 1 Extr. in 3; Belg. with Extract and Oil of Belladonna; not in others.)

It should be spread with a moderately warm iron.

EXTRACTUM.

Take 112 lbs. of fresh leaves and tender branches, bruise in a stone mortar or suitable apparatus, and press out the juice, heat it gradually to 130°,

separate the green colouring matter by a calico filter, heat the strained liquor to 200° F. to coagulate the Albumen, and again filter, evaporate the filtrate by a water-bath to the consistency of a thin syrup, then add to it the green colouring matter previously separated, and, stirring the whole together assiduously, continue the evaporation at a temperature not exceeding 140°, until the extract is of a suitable consistence for forming pills.

100 lb. of herb yields 56 lb. of juice = nearly 4 lb. extract (viz. 63 oz.).
100 lb. leaves, when dried, weigh 16 lb.

(Same as 1864; Lond. inspissated juice of the leaves; Edin. inspissated clear juice of the leaves; Dub. the clear juice of the leaves coagulated by heat, filtered and evaporated; Austr. from leaves; Belg. with clear juice of the herb evaporated and mixed with the powder of the same, so that the whole can be reduced to powder,—also an extract of the herb with fæculæ evaporated to dryness,—also an aqueous extract from the dried root, and alcoholic extracts from the herb, and from the seeds; Pr. from leaves and flowering branches, made with spirit; Fr. clarified juice evaporated; U. S. same as Br., —also an alcoholic extract from the powder of the leaf.

Dose.—$\frac{1}{4}$ to $\frac{1}{2}$ gr. gradually increased to 1 or 2 grs.

TINCTURA.

The dried leaves in coarse powder, 1; Proof Spirit, 20: macerate forty-eight hours in 15 of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, add the remaining spirit, let it drain, wash and press the marc; filter and make up 20. =(1 in 20).

(Same as Brit. 1864; Lond. 1 in $9\frac{1}{2}$; Dub. 1 in 8; U. S. 1 in $7\frac{3}{4}$; (Austr. 1 in 5; Belg. 1 in 5 by weight;) not in others; Belg. and Fr. have an ethereal tincture, and Belg. has a tincture of the fresh herb.)

[*Is only half the strength of London and Dublin.*]

60 minims may be considered about equal in therapeutical strength to 1 gr. of the extract.

Dose.—From 5 to 20 minims.

UNGUENTUM.

Extract of Belladonna, 1; rubbed with a few drops of water, and add Lard, $5\frac{1}{2}$. =(1 in $6\frac{1}{2}$).

(Same as Brit. 1864 and U. S.; Lond. 1 in 9; Belg. with dried leaves; Fr. cérat, 1 in 10; not in others.)

This is not a clean application; it is used to allay irritation of the bladder, by rubbing it upon the perineum; $\frac{1}{2}$ to 1 drm. of Liniment of Belladonna to 1 oz. Lard answers as well, and does not colour the skin.

ROOT.

The dried root of the plant collected in early spring, cultivated or imported.

(In all the Pharmacopœias except Lond. and Edin.)

Preparations.

LINIMENTUM.

The powdered root, 20; Camphor, 1; Rectified Spirit, 20: moisten the root for three days, then pack in a percolator, and add sufficient spirit to produce, with the Camphor, 20. A fluid ounce is equal to a solid ounce.

(Same as Brit. 1864; four times the strength of the extract of the leaves and stalks.)

Prescribed with equal parts of Soap Liniment or Compound Camphor Liniment. An excellent topical application for neuralgic pain. When an oily Liniment is required, the Liniment of Belladonna and Chloroform is best, as it readily dissolves in the oil.

ATROPIA.—*See* ATROPIA.

Not Officinal.

LINIMENTUM BELLADONNÆ ET CHLOROFORMI.—Powdered Root, 20; sufficient Chloroform to percolate 20: mixes with oils, but not readily with spiritous liniments.

Applied with equal parts or more of camphor liniment or olive oil, for painful rheumatism; or 1 part of this mixed with 7 parts of linimentum belladonnæ, and sprinkled on impermeable piline, when applied to the loins in lumbago, is a very speedy remedy.

SUCCUS.—Juice of the plant, 3; Rectified Spirit, 1: mix and filter.

Dose.—4 to 30 minims.

SUPPOSITORIA.—Extract of Belladonna, 1 gr.; Cacao Butter, 6 grs.; Lard, 4 grs.; Wax, 1: mix, and form into a cone for one suppository.

BENZOINUM.

BENZOIN.

The Balsamic Resin, exuded from incisions made in the stem of the *Styrax Benzoin*, a native of Sumatra, Java, Borneo, Laos, and Siam.

There are several qualities of Benzoin in the market; two, however, are chiefly used in medicine, one in agglutinated masses, the other in tears (from Siam), being the purest, and having the stronger odour.

Solubility. The tears wholly soluble in Rectified Spirit, and in Solution of Potash. The mass contains impurities, which are left after treating it with Alcohol.

Sp. g. 1·062 to 1·093.

(In all the Pharmacopœias.)

Medicinal Properties.

Stimulant, expectorant, styptic.

Dose.—10 to 30 grs., rarely given in powder.

Preparations.

ACIDUM BENZOICUM.—*See* ACIDUM BENZOICUM.

ADEPS BENZOATUS, 10 grs. to 1 oz.—*See* ADEPS.

TINCTURA COMPOSITA. Formerly FRIAR'S BALSAM. TRAUMATIC BALSAM.

Benzoin, 8; prepared Storax, 6; Balsam of Tolu, 2; Socotrine Aloes, 1½; Rectified Spirit, 80: macerate seven days, filter, and wash the marc with spirit to make up 80. =(1 in 10).

(Same as Brit. 1864; a compromise between Lond. and Edin.; U. S. much the same; Belg. and Fr. Baume du Commandeur, more complex; not in Dub. Austr. and Pr.)

Dose.—½ to 1 drm., triturated with mucilage or yolk of egg.

Internally given for chronic cough.

Applied externally to languid ulcers, cuts, or wounds.

Not Officinal.

UNGUENTUM BENZOINI (U. S.).—Benzoin, in coarse powder, 1; Lard, 16: heat together in a water bath two hours; strain and stir till cool.

This Benzoated lard is much used for ointments; the Benzoin is said to preserve the lard.

TINCTURA BENZOINI.—Benzoin, 1; Rectified Spirit, 10: dissolve and strain.

(Pr. 1 and 6; Austr. 1 and 12; Belg. 1 in 5, all by weight; not in others.)

A nice lotion to protect the face from the heat of the sun is made with Tincture of Benzoin, 1; Rose-water, 40.

BISMUTHUM.

BISMUTH.

Met with in commerce, is generally impure.

BISMUTHUM PURIFICATUM.

Sp. g. 9·830. A crystalline metal of greyish-white colour, of a distinct roseate tinge; dissolved in a mixture of equal volumes of Nitric Acid and Distilled Water, it forms a solution which, by evaporation, yields colourless crystals that are decomposed on the addition of water, giving a white precipitate. If the mother-liquid from which the crystals have been separated be added to Solution of Carbonate of Ammonia, the precipitate formed and the solution are free, or nearly free, from colour.

Employed for the preparations of Bismuth.

BISMUTHI CARBONAS.

CARBONATE OF BISMUTH.

$2(BiO_3,CO_2),HO$, eq. 521; or $2(Bi_2CO_5),H_2O$, eq. 1042.

A white powder; blacked by Sulphuretted Hydrogen, insoluble in water, soluble with effervescence in Nitric Acid, when added to Sulphuric Acid, coloured with Sulphate of Indigo, the colour of the latter is not discharged; if to Nitric Acid mixed with half its volume of Distilled Water, as much Carbonate of Bismuth be added as the Acid will dissolve, one volume of this solution poured into 20 volumes of water will yield a white precipitate. The Nitric Acid Solution gives no precipitate with Diluted Sulphuric Acid or with Solution of Nitrate of Silver.

Medicinal Properties.

Similar to the Subnitrate.

Dose.—5 to 20 grs.

A new preparation.

BISMUTHI SUBNITRAS.

Syn. White Bismuth, Nitrate of Bismuth, Magistery of Bismuth.

$BiO_3,NO_5,2HO$; or $BiNO_4,H_2O$, eq. 306.

A heavy white powder in minute crystalline scales.

Insoluble in water.

(In all the Pharmacopœias. Lond. Bismuthi Nitras; Dub. Bismuthi Subnitras; Fr. Sous-nitrate de Bismuth; Pr. Bismuthum Hydrico-nitricum.)

Test.—It dissolves in Nitric or Hydrochloric Acid, diluted with half a volume of Distilled Water, without effervescence; is not precipitated by diluted Sulphuric Acid,—indicating absence of Lead. When mixed with dilute Sulphuric Acid in excess, and subjected to Marsh's test, it yields no Arsenic, or merely a trace.

Medicinal Properties.

It is highly useful in pyrosis, some forms of vomiting, and irritative dyspepsia; also in diarrhœa. Externally it is used as a cosmetic, and in lotion for some chronic skin diseases.

Dose.—5 to 15 grs. in pill at meals.

Preparations.

LIQUOR BISMUTHI ET AMMONIÆ CITRATIS.

Purified Bismuth, 1; Nitric Acid, 2; Citric Acid, 2; Solution of Ammonia, a sufficiency: mix the Nitric Acid with an ounce of Distilled Water and add the Bismuth in successive portions. When effervescence has ceased, apply for ten minutes a heat approaching that of ebullition, and decant the solution from any insoluble matter. Evaporate the solution until it is reduced to 2, then add the Citric Acid previously dissolved in 4 of Distilled Water and afterwards the Solution of Ammonia in small quantities at a time, until the precipitate formed is redissolved and the solution is neutral or slightly alkaline to test paper: dilute with distilled water to the volume of 20.

Sp. g. 1·122. One fluid drachm contains 3 grs. of Oxide of Bismuth.

Dose.—½ to 1 drm.

Incompatibles.—Potash, Soda, Ammonia, and their carbonates.

Medicinal Properties.

Similar to Subnitrate, but more convenient, being in a liquid form.

TROCHISCI.

White Bismuth, 3¼ oz. and 18 grs.; Carbonate of Magnesia, 4 oz.; precipitated Carbonate of Lime, 6 oz.; Sugar, 29 oz.; Gum Arabic, 1 oz.; Mucilage, 2 oz.; Rose Water, a sufficiency: make 720 lozenges.

Each lozenge contains 2 grains of Subnitrate of Bismuth.

(Brit. 1864; Fr. Tablettes, 1½ grs. in each.)

Dose.—1 to 6 lozenges.

Not Officinal.

Unguentum.—Bismuth, 1; Simple Ointment, 4.

Lotio Bismuthi.—Nitrate of Bismuth, 6 grs.; Corrosive Sublimate, ½ gr.; Spirits of Camphor, 1½ minim; water to 1 oz.: mix. Skin Hospital.

A soothing lotion in chronic cases.

BORAX.

BORAX.

Biborate of Soda, $NaO,2BO_3+10HO$, eq. 191; or $Na_2B_4O_7,10H_2O$, eq. 382.

A salt imported in a crude state from India; large quantities are also manufactured from the native Boracic Acid of Tuscany, and the native Borate of Lime of Peru.

In transparent colourless crystals, sometimes slightly effloresced. A hot saturated solution when acidulated with any of the Mineral Acids, lets fall as it cools a scaly crystalline deposit (Boracic Acid), a solution of which in spirit burns with a green flame.

Solubility in water, 1 in 22; boiling water, 1 in 2; 2 ounces of Borax are dissolved by 2 ounces of Glycerine, and the solution measures only 3¼ ounces. By the aid of 1 of Glycerine, 1 part of Borax will dissolve in 12 of Water. Insoluble in Rectified Spirit; with mucilage it solidifies.

Test.—191 grains dissolved in 10 fluid ounces of distilled water require for saturation 1000 grain-measures of the volumetric solution of Oxalic Acid. Biborate of Soda is an alkaline salt, and the quantity of Oxalic Acid required to render it neutral is the proof that it is not contaminated with neutral salts.

(In all the Pharmacopœias; Dub. Sodæ Biboras; Fr. Borate de Soude; Pr. Natrum Biboracicum.)

Incompatibles.—Mineral Acids and most of their salts.

Medicinal Properties.

Refrigerant and diuretic. Causes contraction of the uterus; and is combined with ergot and cinnamon-water to produce expulsion of the placenta. Used as an emmenagogue. Externally in skin diseases. A saturated solution is applied with great success in pityriasis versicolor, and it acts by dissolving the epidermis, and so removing the parasite.

Dose.—5 to 30 grs.

Preparations.

GLYCERINUM BORACIS.

Borax in powder, 1; Glycerine, 4: rub together until dissolved.
(By weight 1 in 6, by measure 1 in 4¾.)

Dose.—½ to 1½ drm.

MEL.

Finely powdered Borax, 1; Clarified Honey, 7: =(1 in 8).

(Brit. 1864, Lond. Edin. Dub. and U. S. 1 in 9; not in others.)

Applied to aphthæ of the mouth.

A great improvement in Mel Boracis would be to dissolve 1 of Borax in 1 of Glycerine, and then add 6 of Honey.

Not Officinal.

LOTIO.—Borax, 1; Rose-water, 24.

Used as a cosmetic.

TINCTURA MYRRHÆ ET BORACIS.—Myrrh, 1; Eau de Cologne, 16; Borax, 1; Water, 3; Syrup, 3.

For the teeth and gums.

UNGUENTUM.—Borax, 1; Simple Ointment, 8.

For chilblains or cracked nipples.

BROMUM.

BROMINE.

A liquid non-metallic element, obtained from sea-water and from some saline springs.

A dark brownish-red, very volatile liquid, with a strong disagreeable odour.

Sp. g. 2·966; boils at 117°; used to prepare Ammonii Bromidum, Potassii Bromidum.

BUCHU FOLIA.

BUCHU LEAVES.

The dried leaves of the *Barosma betulina*, *B. crenulata*, *B. serratifolia*, imported from the Cape of Good Hope.

Water and Alcohol extract their virtues, which probably depend on volatile oil and extractive.

(In all the Pharmacopœias except Austr.)

Medicinal Properties.

Tonic, stomachic, diuretic, and diaphoretic. Given chiefly in complaints of the urinary organs, attended with excess of uric acid, morbid irritation of the bladder and urethra, diseases of the prostate, and retention or incontinence of urine. Also in dyspepsia, chronic rheumatism, cutaneous affections, and dropsy.

Dose.—20 to 40 grs. in powder.

Preparations.

INFUSUM.

Buchu bruised, 1; boiling Distilled Water, 20: infuse for an hour and strain. =(1 in 20).

(Same as Brit. 1864, Lond. Ed. and Dub.; U. S. 1 in 16; not in others.)

Dose.—1 to 2 oz.

TINCTURA.

Buchu bruised, 1; Proof Spirit, 8: macerate for forty-eight hours with ¾ of the Spirit, pack in a percolator, and let it drain, then pour on the rest of the spirit; when it ceases to drop, press and wash the marc, filter and make up 8. =(1 in 8.)

(Same as Brit. 1864, Edin. and Dub.; not in others.)

Dose.—1 to 2 drms.

CADMIUM.

CADMIUM.

Cd, eq. 56; or Cd, eq. 112.

A white metal closely resembling Tin, but harder and more tenacious, sp. g. 8·60. Does not become oxidized except when heated; the oxide is orange-coloured, not volatile, and easily reducible.

CADMII IODIDUM.

IODIDE OF CADMIUM.

Cd I, eq. 183; or $Cd I_2$, eq. 366.

It may be formed by direct combination of Iodine and Cadmium in the presence of water.

In flat micaceous crystals, white and of a pearly lustre, which melt at 600° forming an amber-coloured fluid.

Ten grains dissolved in water, and Nitrate of Silver added in excess, give a precipitate, which when washed with water, and afterwards with half an ounce of Solution of Ammonia and dried, weighs 12·5 grains.

UNGUENTUM.

Iodide of Cadmium, 1; Simple Ointment, 7: mix. =(1 in 8).

This may be used when the Unguentum Plumbi Iodidi is objected to, as the latter imparts a yellow colour to the skin.

CAJUPUTI OLEUM.

OIL OF CAJUPUT.

The Oil distilled from the leaves of the *Melaleuca minor*, imported from Batavia and Singapore.

Very mobile, transparent, of a fine pale bluish-green colour. It has a strong agreeable odour, and a warm aromatic taste, and leaves a sensation of coldness in the mouth.

Solubility: entirely in Alcohol.

Test.—Sp. g. ·914. Dropped on water, it speedily evaporates. It burns rapidly, without leaving any residue.

Contained in Linimentum Crotonis.

Medicinal Properties.

A powerful topical and general stimulant, antispasmodic, and diaphoretic. Efficacious in dropsy, chronic rheumatism, hysteria, flatulent colic, and other spasmodic and nervous affections, and in low states of the system. Exter-

nally, largely diluted with Olive Oil (1 to 2), used to allay chronic rheumatism and gout pains. Applied with lint for toothache.

(In all the Pharmacopœias.)

Dose.—1 to 5 minims on a lump of Sugar, or in any bland fluid.

Preparation.

SPIRITUS CAJUPUTI.

Oil of Cajuput, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

(Brit. 1864, 1 in 10.)

Dose.—30 to 60 minims.

CALCIUM.

CALCIUM.

Ca, eq. 20; or **Ca**, eq. 40.

Calcium, a brilliant white combustible metal, was discovered by Sir Humphry Davy in 1808. It is the metallic base of Lime.

CALCII CHLORIDUM.

DRY CHLORIDE OF CALCIUM.

Ca Cl, eq. 55·5; or **Ca** Cl_2, eq. 111.

Crystals fused and evaporated till it becomes solid, and finally dried at about 400°. In white agglutinated masses, very deliquescent; evolves no Chlorine or Hypochlorous Acid on the addition of Hydrochloric Acid, and is entirely soluble in twice its weight of water, also in Alcohol.

Brit. Ph. dose.—10 to 20 grs.

Not Officinal.

Chloride of Calcium, Muriate of Lime in Crystals.—Consists of equal weights of water and dried Chloride of Calcium.

5 grs. of the crystal in 2 oz. of water, and a fourth part given frequently, arrests sickness when most remedies fail.

It is also given in glandular diseases.

Liq. Calcii Chloridi, Dub.—2 oz. of dried Chloride in 8 oz. Distilled Water.

Dose.—30 minims.

CALX.

LIME.

Ca O, eq. 28; or **Ca O**, eq. 56.

The oxide of the metal Calcium, in hard flaky masses, which, when well sprinkled with water, should crack, swell up, evolve much heat, and crumble to powder.

Solubility.—At 32° F. twenty oz. of water dissolves 13·25 grs.
60° ditto 11·6
212° ditto 6·7

Test.—If previously slaked, it dissolves without effervescence in dilute Hydrochloric Acid, and if this solution be evaporated to dryness, and the residue redissolved in water, only a very scanty precipitate forms on the addition of saccharated solution of Lime—indicating absence of Phosphate of Lime.

Preparation.

CALCIS HYDRAS.—*See* page 58.

CALX CHLORATA.

CHLORINATED LIME.

A product obtained by exposing slaked Lime to the action of Chlorine as long as the latter is absorbed; it possesses bleaching and disinfecting properties.

Consists of 1 equivalent of Hypochlorite of Lime, 1 eq. of Chloride of Calcium, and a variable amount of Hydrate of Lime.

A dull white powder with a feeble odour of Chlorine, partially soluble in water.

Test.—10 grains mixed with 30 grains of Iodide of Potassium, and dissolved in 4 fluid ounces of water, produce, when acidulated with 2 fluid drachms of Hydrochloric Acid, a reddish solution which requires for the discharge of its colour at least 850 grain-measures of the volumetric solution of Hyposulphite of Soda, corresponding to 30 per cent. of Chlorine liberated by Hydrochloric Acid.

In this test, the Hydrochloric Acid, acting on the Hypochlorite of Lime, liberates Chlorine, and this reacting on the Iodide of Potassium, sets free an equivalent quantity of Iodine, which, if the Chlorinated Lime be good, will require the quantity stated of solution of Hyposulphite of Soda to convert it into colourless Iodide of Sodium and Tetrathionate of Soda.

(Same as Brit. 1864; Lond. Edin. Dub. and U. S. Calx Chlorinata; Austr. Calcaria Chlorata; Pr. Calcaria Hypochlorosa; Belg. Chloruretum Calcis; Fr. Hypochlorite de Chaux.)

Preparations.

LIQUOR CALCIS CHLORATÆ.

Chlorinated Lime, 1; Distilled Water, 10: triturate and shake well together for three hours in a bottle, and strain. =(1 in 10).

(Same as Brit. 1864, and Dub. and Belg.; Belg. has also a weak solution, 1 of strong solution in 4 water; Fr. 1 in 45; not in others.)

Test.—Sp. g. 1·035. 1 fluid drachm (60 grains by weight) mixed with 20 grains of Iodide of Potassium dissolved in 4 ounces of water, when acidulated with 2 drachms of Hydrochloric Acid, gives a red solution, which requires for the discharge of its colour 500 grain-measures of the volumetric

solution of Hyposulphite of Soda, corresponding to 13 grains of available Chlorine in a fluid ounce. (Explanation of Test given under CALX CHLORATA.)

Medicinal Properties.

Not much employed internally; externally as a lotion to foul ulcers, burns, chilblains, and cutaneous eruptions, especially the itch. A disinfecting agent.

Dose.—20 to 40 minims in a wineglassful of water.

VAPOR CHLORI.

Chlorinated Lime, 2 oz; Cold Water, sufficient to moisten it: the vapour to be inhaled from a suitable apparatus.

ANTIDOTES.—In case of poisoning by Chloride of Lime the antidotes are, Emetics, White of Egg, Milk, Flour; not Acids.

CALCIS CARBONAS.—*See* CRETA PRÆPARATA.

CALCIS CARBONAS PRÆCIPITATA.

PRECIPITATED CARBONATE OF LIME.

CaO,CO_2, eq. 50; or Ca,CO_3, eq. 100.

A white crystalline powder. Insoluble in water.

Chloride of Calcium, 5; Carbonate of Soda, 13; boiling Water, 80: dissolve each in 40, mix, and precipitate.

Test.—With dilute Nitric Acid it gives a clear solution, which, if perfectly neutral, and deprived of Carbonic Acid by boiling, is not precipitated by saccharated solution of Lime added in excess, or by the solution of Nitrate of Silver,—indicating the absence of phosphates and chlorides.

(Same as Brit. 1864, Dub. Fr. and U. S.; not in others.)

Medicinal Properties.

Antacid and astringent; a corrective for diarrhœa.

Dose.—10 to 100 grs., in powder or mixture.

CALCIS HYDRAS.

SLAKED LIME.

CaO,HO, eq. 37; or Ca,H_2O_2, eq. 74.

A white powder, strongly alkaline and caustic.

Lime, recently burned, 32; water, 20: slake the Lime, sift the powder, and keep in a bottle. Should be recently prepared.

Solubility: sparingly soluble in water (1 in 800); the solution, on exposure, soon acquires a film of Carbonate of Lime.

Test.—Should not effervesce on the addition of an acid.

Preparations.

LINIMENTUM CALCIS.

Solution of Lime, 1; Olive Oil, 1: mix. =(1 in 2).

(Same as Brit. 1864, Lond. and Dub.; Edin. and U. S. are made with Linseed Oil, and then called Carron Oil; Belg. Solution of Lime, 88, Almond Oil, 12, mix; Fr. Linim. Calcaire, 9 in 10, but rejecting the water and using only the cream; not in Austr. and Pr.)

Use.—The best liniment to apply to burns and scalds.

LIQUOR CALCIS. SOLUTION OF LIME, OR LIME WATER.

Slaked Lime, 1; Water, 80.

(Same as Brit. 1864; Lond. Edin. and Dub. and U. S. 1 to 40; Fr. Eau de Chaux; Austr. Belg. Pr. Calcaria Soluta.)

Water becomes saturated with much less Lime than ordered, therefore Liquor Calcis is of the same strength in all.

Bottles containing Lime Water should be kept full, and well closed from the air.

Each ounce contains ½ gr. of Lime.

Used in diarrhœa connected with acidity, and in some cases of dyspepsia; also in some calculous affections, and given to children for rickets.

Dose.—½ to 2 oz. as an antacid. *Brit. Ph. dose.*—1 to 4 oz.

Used for Lotio Hydrargyri Flava et Nigra.

LIQUOR CALCIS SACCHARATUS.

Slaked Lime, 1; Refined Sugar in powder, 2; Distilled Water, 20: digest for some hours, and strain.

(Brit. 1864.)

Test.—Sp. g. 1·052. 1 fluid ounce (460·2 grains by weight) requires for neutralization 254 grain-measures of standard solution of Oxalic Acid, which corresponds to 7·11 grains of Lime. =(1 in 68).

Given to correct chronic vomiting, and vomiting of pregnancy.

Dose.—15 to 60 minims in milk.

INCOMPATIBLES.—Vegetable and Mineral Acids, Alkaline and Metallic Salts, Tartar Emetic.

CALCIS PHOSPHAS.

PHOSPHATE OF LIME.

$3CaO,PO_5$, eq. 155; or $Ca_3P_2O_8$, eq. 310.

A light white amorphous powder.

Insoluble in water.

Test.—10 grains dissolve perfectly, and without effervescence, in dilute Hydrochloric Acid,—indicating absence of carbonate. The solution yields with Ammonia a white precipitate, which is insoluble in boiling solution of Potash, and when washed and dried weighs 10 grains.

(Brit. 1864, precipitata; Austr. Dub. Fr. and U. S.; not in others.)

Medicinal Properties.

For rickets and mollities ossium; said to be useful in scrofulous affections, and to promote union of bone fractures.

Dose.—10 to 40 grs.

Contained in Pulvis Antimonialis,—2 parts in 3.

Not Officinal.

HYPOPHOSPHITE OF LIME. *Dose.*—3 to 5 grs., either alone or dissolved in Glycerine. Given in cases of nervous and general debility and pulmonary consumption.

Contained in Glycerole of the Hypophosphites.

CALUMBÆ RADIX.

CALUMBO ROOT.

The root of the *Jateorrhiza Columba* and *Cocculus palmatus*, sliced transversely and dried; from the forests of Eastern Africa between Ibo and the Zambezi. It is easily reduced to powder, which has a greenish tinge; it becomes browner with age, and deepens when it is moistened.

Test.—Moistened with a solution of Iodine, it becomes black—indicating presence of Starch. A decoction is not blackened by the persalts of Iron—indicating absence of astringent matter.

Medicinal Properties.

A bitter stomachic and tonic, useful in debility of the digestive organs. Given in convalescence from acute diseases, combined with Alkalies or Bismuth. It is one of the few bitters that can be prescribed with Salts of Iron.

Dose.—Of the powder 10 to 20 grs. three or four times a day.

Frequently given with powdered Ginger, Subcarbonate of Iron, and Rhubarb.

(In all the Pharmacopœias.)

Preparations.

EXTRACTUM.

Calumbo, cut small, 1; Distilled Water, 5: macerate in half the water for twelve hours, strain and press; macerate again with the remaining water, strain and press; mix and filter the liquors, and evaporate with the heat of a water-bath to pill consistence.

(Brit. 1864, Austr. Fr. and Pr., with Proof Spirit; Belg. Alcoholicum et Aquosum; not in others.)

Dose.—2 to 10 grs.

A new preparation.

INFUSUM.

Calumbo, coarsely powdered, 1; cold Distilled Water, 20: macerate one hour, and strain. =(1 in 20).

Calumbo root contains starch and mucilage, both of which are dissolved by hot water; cold water dissolves the mucilage only.

(Same as Brit. 1864, Lond., with hot, 1 in 27; Edin., with cold, 1 in 40; U. S. allows both, 1 in 32; Dub., with cold, 1 in 24; not in others.)

Dose.—1 to 2 oz.

Physicians prescribing for patients who wish to take with them a supply of their medicines containing Infusion of Calumbo, will find 2 drachms of Tincture to be of about the same therapeutical strength as 1 oz. of the infusion.

TINCTURA.

Bruised Calumbo, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, and let it drain, then pour on the remaining spirit; when it ceases to drop, press, and wash the marc with spirit to make up 8. =(1 in 8).

(Same as Brit. 1864, Fr. Dub. and U. S., and 50 per cent. stronger than Lond. or Edin.; Belg. 1 in 5 by weight; not in others.)

Dose.—½ to 2 drms.

CAMBOGIA.

GAMBOGE.

A Gum Resin, from Garcinia Morella, imported from Siam.

Soluble in Rectified Spirit, which is rendered of an opaque yellow by water; in Ammoniated Alcohol, which is not rendered turbid by the addition of water; in Ether to the amount of four-fifths.

Test.—An emulsion made with boiling water, and cooled, does not become green on addition of Solution of Iodine,—indicating absence of flour or starch.

Medicinal Properties.

It is employed in the treatment of dropsy, attended with torpidity of the bowels, generally in combination with Elaterium, Bitartrate of Potash, or Jalap. Also in cases of obstinate constipation, and has frequently been found effectual in the expulsion of the tapeworm. As it is apt to occasion much sickness and griping, it is best given in small doses, repeated at short intervals, until it operates.

It may be given in pill or emulsion, or dissolved in an alkaline solution; the last method has been recommended in dropsical complaints.

(Brit. 1864, Lond. Edin. Dub. and U. S. Gambogia; Austr. Belg. Fr. Pr. Gummi Gutti.)

Dose.—1 to 5 grs. In cases of tænia, may be increased to 10 or 15 grs.

Preparation.

PILULA COMPOSITA.

Gamboge, 1; Barbadoes Aloes, 1; Compound Powder of Cinnamon, 1; Hard Soap, 2; Syrup, a sufficiency: mix. =(probably 1 in 6).

(Same strength as Brit. 1864, and Edin.; nearly as Lond.; Fr. Pilules des Bontius; not in others.)

Dose.—5 to 10 grs.

CAMPHORA.

CAMPHOR.

$C_{20}H_{16}O_2$.

A concrete volatile oil obtained from the wood of *Camphora officinarum*, imported in a crude state from China and Japan, and sublimed in bell-shaped masses. The Borneo Camphor from the Dryobalanops, though virtually the same as the officinal, is valued by the Chinese a hundred times more.

Solubility in Water, 1 in 1000; in Rectified Spirit, 1 in $1\frac{1}{4}$; or by weight, 1 in 1; freely in Chloroform, Ether, volatile and fixed oils, and Acetic Acid; but not in Alkalis. Carbonic Acid, Bicarbonate of Magnesia, and Myrrh increase its solubility in water. Milk is a solvent and a good vehicle to administer it in.

Test.—Its sp. g. varies from ·986 to ·996. It evaporates entirely, if left exposed to the air. It melts at 288° F., boils at 400°, and in close vessels sublimes unchanged.

Medicinal Properties.

Stimulant at first, afterwards sedative; antispasmodic, and diaphoretic.

In moderate doses it produces (in health) mental exhilaration, increases the heat of the skin, and occasions diaphoresis. It allays nervous irritation, and produces a general placidity of feeling. Camphor Spirit mixed with warm water to bathe the nostrils is highly useful in hay fever. It is useful in cholera and diarrhœa, and in large doses it causes giddiness and disposition to sleep. It is an antaphrodisiac, and given in chordee.

(In all the Pharmacopœias.)

Dose.—2 to 10 grs.

Contained in Linimentum Aconiti, Lin. Belladonnæ, and other Liniments and Ointments.

Preparations.

AQUA. *Syn.* MISTURA CAMPHORÆ.

Camphor broken small, $\frac{1}{2}$ oz.; Distilled Water, 1 gallon: digest at least two days, confining the Camphor under the water.

(Same as Brit. 1864; Lond. and Belg. Mistura Camphoræ, and made with a small quantity of Spirit; Edin. contained also almonds; Dub. with Tincture; Fr. Eau Camphrée; U.S. with a little Spirit and Carbonate of Magnesia; not in others.)

Dose.—1 to 2 oz. = $\frac{1}{2}$ or 1 gr. of Camphor.

LINIMENTUM.

Camphor, 1; Olive Oil, 4: dissolve. =(1 in 5).

(Same as Brit. 1864, Lond. Edin. Dub. and U.S.; Belg. and Fr. Oleum Camphoratum by weight 1 in 10; Austr. do., 1 in 3; not in Pr.)

LINIMENTUM COMPOSITUM.

Camphor, 5; English Oil of Lavender, $\frac{1}{4}$; strong Solution of Ammonia,

10; Rectified Spirit, 30: dissolve the Oil and Camphor in the Spirit, and gradually add the Ammonia.

(Same as Brit. 1864, Dub. and Fr.; contains nearly twice the amount of Ammonia as Lond.; not in others.)

Stimulating. Most useful in tic-douloureux and chronic rheumatism. Painful neuralgia has been relieved by applying lint previously soaked in the liniment and covered with a dry napkin until redness is produced, and then lightly rubbing the part with a solution of Bimeconate of Morphia until the effect is produced.

SPIRITUS.

Camphor, 1; Rectified Spirit, 9: dissolve. =(1 in 10).

(Same as Brit. 1864; Lond. Dub. and U. S., 1 in 9; Edin. 1 in 17. (Austr. 1 in 9; Fr. Alcoöl Camphré, 1 in 10, Pr. 1 in 13, by weight.)

Dose.—10 to 30 minims in Milk or on Sugar.

TINCTURA CAMPHORÆ COMPOSITA. Compound Tincture of Camphor.

Opium, in coarse powder, 40 grs.; Benzoic Acid, 40 grs.; Camphor, 30 grs.; Oil of Anise, ½ drm.; Proof Spirit, 20 oz.: macerate seven days, strain, wash the marc with spirit, and filter 20 oz. =(1 of opium in 240).

Known as Paregoric Elixir. 1 drm. contains ¼ gr. Powder of Opium = ⅛ gr. of Extract.

Given to allay spasmodic cough in bronchitis and in phthisis.

(Same as Brit. 1864, Tinct. Camphoræ cum Opio; Edin. and U. S.; Belg. ⅓ stronger than Lond. and ½ weaker than Dub.; Fr. 1 *Extract* of Opium in 242, therefore twice the strength of British; Pr. contains much more Benzoic Acid and Aniseed; not in Austr.)

Dose.—15 to 60 minims.

Not Officinal.

Camphor Balls.—Camphor, 2; White Wax, 5; Spermaceti, 3; Oil of Almonds, 3; Tincture of Tolu, ¼: melt, and pour into half-ounce gallipots.

Camphora cum Creta.—Camphor, 1; Prepared Chalk, 8: powder the Camphor by rubbing it with a few drops of Rectified Spirit, mix in the Chalk, and pass the whole through a sieve. A dentifrice.

Ceratum.—Camphor, 2; White Wax, 3; Lard, 4; Oil of Almonds, 3: melt.

Essentia.—Camphor, 1; Rectified Spirit, 20:—or Camphor, 1; Rectified Spirit, 18; Tincture of Myrrh, 2. In domestic use for making Julep. Given for diarrhœa, 5 minims every 10 or 15 minutes in water till diarrhœa is arrested.

CANELLÆ ALBÆ CORTEX.

WHITE CANELLA BARK.

The Bark of *Canella alba;* from the West Indies.

Contained in Vinum Rhei.

CANNABIS INDICA.

INDIAN HEMP.

The flowering tops of the female plant of the *Cannabis sativa*, from which the resin has not been removed, dried. Cultivated in India.

We are indebted to Dr. O'Shaughnessy for the first introduction of Indian Hemp into this country. He brought over a quantity from India, which the

Author converted into extract for him, and distributed amongst a large number of the profession under Dr. O'Shaughnessy's directions.

Medicinal Properties.

Dr. Clendinning used it largely, and his opinion is as follows:—"It acts as a soporific or hypnotic in conciliating sleep; as an anodyne in lulling irritation; as an antispasmodic in checking cough and cramp; as a nervine stimulant in removing languor and anxiety, and raising the pulse and spirits without any drawback or deduction on account of indirect or incidental inconveniences, producing tranquil sleep without causing constipation, nausea, or other effect or sign of indigestion, without headache or stupor."

More recently Dr. Russell Reynolds has found it very successful in certain cases of insomnia, neuralgia, and spasm. He says it relieves these derangements of the nervous system, without interfering with any one of the functions of organic life, and does not produce the after suffering of misery, which follows many opiates.

Not prescribed in powder.

(Brit. 1864, Dub. U.S. Belg.; Fr. has only "Hachisch" prepared from the leaves; Pr. Fructus; not in others.)

Preparations.

EXTRACTUM.

Indian Hemp, in coarse powder, 1; Rectified Spirit, 5: macerate seven days, press out the tincture, distil off the spirit, and evaporate.

Dose.—¼ to 1 gr. in pill.

(Same as Brit. 1864, Dub. U.S.; not in others.)

TINCTURA.

Extract of Indian Hemp, 1; Rectified Spirit, 20: dissolve. =(1 in 20).

(Same as Brit. 1864, Dub. and U.S.; not in others.)

20 minims contain 1 grain of extract.

Dose.—5 to 20 minims with 1 drm. of mucilage, adding 1 oz. of water.

☞ The tincture should be previously triturated with the mucilage, or the resin will be precipitated by the water.

Antidote.—In case of over-dose, hot brandy-and-water may be given, and the patient be allowed to sleep.

CANTHARIS.

CANTHARIDES.

The *Cantharis vesicatoria* dried; collected in Spain, France, Russia, Sicily, and Hungary. Contains a crystalline principle, called Cantharidine.

Test.—Free from mites.

The powder should be dry and kept closely corked, for if at all damp it is apt to acquire a putrid odour.

Medicinal Properties.

Externally its effects are rubefacient and irritant; by continued application it is vesicant. For the latter purpose the plaster or liniment is generally used,

and is especially effective in inflammation of deep-seated parts, as in pleuritis, pericarditis, pneumonia, etc. It acts for a longer period, and is less irritating to the patient than Ammoniacal or Acetic Acid embrocations. Internally as tincture in chronic affections of the nervous system, paraplegia, etc. It has a diuretic effect, and is given in gleet or other mucous discharges; but it should be given cautiously, for it sometimes produces strangury.

(In all the Pharmacopœias.)

It is used as an application to ringworm. It is the basis of most of the applications used to increase the growth of hair.

In chronic inflammation of the bladder it should *not* be used as a counter-irritant, from its irritating effects on the urinary organs when absorbed by the skin. A solution of Nitrate of Silver (½ oz. to 1 oz. of water) is to be preferred.

ANTIDOTES.—In case of poisoning by Cantharides the antidotes are, Emetics, emollient drinks, Opiates by the mouth and rectum.

Preparations.

ACETUM.

Cantharides in powder, 2; Glacial Acetic Acid, 2; Acetic Acid (28 per cent.), 18, or a sufficiency: add the Glacial Acetic Acid to 13 of Acetic Acid, and in this mixture digest the Cantharides for two hours at a temperature of 200° F., when cold, place them in a percolator, and when the liquid ceases to drop, pour over the residuum the remaining 5 of Acetic Acid, and when the percolation is finished, press and make the whole liquid up to 20.

Rather stronger than London, and about half the strength of Edin. and Dub.

CHARTA EPISPASTICA.—BLISTERING PAPER.

White Wax, 4; Spermaceti, 1½; Olive Oil, 2; Resin, ¾; Canada Balsam, ¼; Cantharides in powder, 1; Distilled Water, 6: digest all the ingredients excepting the Canada Balsam in a water bath for two hours, stirring them constantly, then strain, and separate the plaster from the watery liquid; mix the Canada Balsam with the plaster melted in a shallow vessel, and pass slips of paper over the surface of the hot liquid, so that one surface of the paper shall receive a thin coating of plaster.

(Fr. Papier Épispastique half the strength; not in others.)

EMPLASTRUM.

Cantharides in very fine powder, 12; Yellow Wax, 7½; prepared Suet, 7½; Resin, 3; prepared Lard, 6: melt the four last together, and stir in the first. =(1 in 3).

(Same as Brit. 1864, Lond. Austr. and Dub.; Edin. Belg. Fr. Emplastr. Vesic. 1 in 3; Pr. 1 in 4; not in U. S.)

Oiled tissue-paper, or very thin silk, is sometimes placed between the plaster and the skin, to prevent irritant action on the urinary organs. In France, powdered Camphor is sprinkled on the blister for the same purpose.

EMPLASTRUM CALEFACIENS.

Cantharides in coarse powder, 4; boiling Water, 20; expressed Oil of Nutmeg, 4: Yellow Wax, 4; Resin, 4; Soap Plaster, 52; Resin Plaster, 32: infuse the Cantharides in the water six hours, strain and press through calico, and evaporate till reduced to one-third, then add the rest and melt all together. =(1 in 25).

(Same as Brit. 1864; Dub. 1 in 32; U. S. Emplastrum Picis cum Cantharide, 1 in 39; not in others.)

LIQUOR EPISPASTICUS.

Powdered Cantharides, 8; Acetic Acid, 4; Ether, 20: macerate the Cantharides in the Acetic Acid twenty-four hours, and add Ether to percolate 20. =(1 in $2\frac{1}{2}$).

(Same as Linim. Cantharidis, Brit. 1864; Dub. Linimentum, Cantharides 3, Olive Oil 12, digest hot three hours and strain; U. S. Linimentum, Cantharides 1, Oil of Turpentine 8, digest hot three hours and strain; not in others.)

Applied with a camel-hair brush, speedily produces a blister. The Dub. Liniment will produce a blister, without much pain, in six hours, if a double fold of lint is soaked in it and applied.

TINCTURA.

Cantharides in coarse powder, 1; Proof Spirit, 80: macerate, agitating occasionally, for seven days in a closed vessel, strain, press, filter, and add sufficient Proof Spirit to make up 80. =(1 in 80).

(Same as Brit. 1864, Lond. Edin. and Dub.; U. S. 1 in 30; Austr. Fr. both with Alcohol, and with Acetic Ether 1 in 10 by weight; Pr. with Rectified Spirit, 1 in 6; Belg. 1 in 5 by weight, also an ethereal tincture.)

Dose.—5 to 20 minims.

UNGUENTUM.

Cantharides in fine powder, 1; Olive Oil, 6; Yellow Wax, 1: digest the Cantharides in the Oil for twelve hours, and for $\frac{1}{4}$ hour at 212°; strain, and add the melted Wax, and stir till cold. =(1 in 8).

(Same as Brit. 1864; Lond. Edin. Dub. nearly of the same strength; Lond. boiled in water, and Resin Cerate added; Edin. a mixture with Resin Ointment; Dub. heated in Oil, strained, and melted with Wax and Spermaceti; Belg. 1 in 6; Fr. Pommade Épispastique Verte, 1 in 33, and P. E. Jaune, 1 in 17; Pr. 1 in 7; not in U.S.)

Employed to promote discharge from a blistered surface.

Not Officinal.

Hair Wash.—Vinegar of Cantharides, 1; Glycerine, 1; Tincture of Bark, $\frac{1}{2}$; Orange Flower-water, 8; Rose Water, 8: mix.

Linimentum Crinale.—Cantharidine, 1 gr.; Acetic Ether, $\frac{1}{4}$ oz., dissolve and add: Rectified Spirit, 3 oz.; Castor Oil, 1 oz.; Oil of Lavender, 15 minims.

This Liniment is highly recommended to be applied to the head where the hair is falling off, and is said even to cause it to grow on bald places; but after applying it a few times the head should be washed, or it may accumulate and cause too much irritation.

Unguentum Stimulans.—Erasmus Wilson's. Cantharides in powder, 3; Lard, 12, macerate with a moderate heat for twenty-four hours and filter through paper.

The following are also employed as blistering agents:—

Brown's Blistering-Tissue; Papier d'Albespeyres, No. 1, 2, and 3: 3 is the strongest.

CAPSICI FRUCTUS.

CAPSICUM FRUIT.

The ripe fruit of the *Capsicum fastigiatum* dried; imported from the coast

of Guinea, and from the East and West Indies, and distinguished in commerce as Guinea Pepper and Pod Pepper.

It yields its virtues to Water, Alcohol, Ether, Acetic Ether, and the fixed and Volatile Oils.

Medicinal Properties.

A powerful stimulant, used chiefly as a condiment. In intermittent fevers with Quinine, in low forms of fever, diarrhœa, cholera, and in the black vomit of hot climates. In dyspepsia and sea-sickness. Used as a gargle in scarlet fever and malignant sore-throat. Externally as a rubefacient.

(In all the Pharmacopœias; Fr. Poivre de Guinée.)

Dose.—½ to 1 gr. of the powder in a pill, or in dinner pills.

Preparation.

TINCTURA.

Capsicum, bruised, 1; Rectified Spirit, 27: macerate forty-eight hours with three-fourths of the spirit, agitating occasionally, pack in a percolator, and let it drain, then pour on the remaining spirit; as soon as it ceases to drop, wash the marc with spirit to make up 27. =(1 in 27).

(Same as Brit. 1864. About the same as Lond. Edin. and U. S.; half the strength of Dub.; Austr.; Belg. Tinct. Piper. Hispan. 1 in 6; not in others.)

Dose.—10 to 20 minims.

For a gargle, 1 drm. in 8 oz. of Infusion of Roses.

Not Officinal.

Capsicin.—An acrid soft resin or oil obtained by digesting the Alcoholic Extract in Ether and evaporating the Ethereal solution. It is a thick liquid of a yellowish-red colour, which is liquefied by heat and at a high temperature volatilizes. ½ a grain only thus volatilized in a large room will cause all who respire the air of the room to cough and sneeze. It is soluble in Alcohol, Ether, and Oil of Turpentine.

Linimentum Capsici (the Concentrated Tincture of Dr. Turnbull).—Capsicum, 1; Rectified Spirit, 3: macerate seven days and strain.

Used externally for swollen chilblains and as a counter-irritant, but not when the skin is broken. For chilblains, saturate a piece of sponge or flannel with a tincture, and rub the chilblain well until a strong tingling is produced. Continue daily until recovery. A small dossil of lint or cotton, dipped into the tincture, is an excellent remedy for toothache.

Tissue paper imbued with a strong tincture of this drug, and perhaps a little mustard oil, is sold as a sinapism, to produce counter irritation, under the name of Sinapine.

CARBO ANIMALIS.

ANIMAL CHARCOAL—BONE BLACK.

The residue of bones which have been exposed to a red-heat without the access of air; consists principally of charcoal and phosphate and carbonate of lime.

CARBO ANIMALIS PURIFICATUS.

PURIFIED ANIMAL CHARCOAL.

From which its earthy salts have been almost wholly removed.

Bone Black, 16; Hydrochloric Acid, 10; Distilled Water, a sufficiency.

Digest the Bone Black in the acid mixed with twice the quantity of water in a moderate heat for two days, thoroughly wash on a calico filter, until what passes through it gives scarcely any precipitate with nitrate of silver; dry and heat to redness, in a covered crucible.

Test.—If it contains Carbonate of Lime, Hydrochloric Acid will cause effervescence, and the solution obtained will give a precipitate with Carbonate of Ammonia; and if Phosphate of Lime be present, the acid will dissolve the salt, and yield it as a precipitate on the addition of Ammonia. When burned at a high temperature, with free access of air, it leaves scarcely any residue.

Medicinal Properties.

Dr. Garrod, and Dr. Rand of Philadelphia, state that it has the property of counteracting the poisonous effects of Morphia, Strychnia, and Aconitia. Dr. Rand says that these alkaloids may be swallowed with impunity if mixed in due proportion with purified Animal Charcoal. It destroys the fœtor of ulcers, etc. It is much used as a decolorizing agent in various pharmaceutical processes.

Dose.—20 to 60 grs.

(Brit. 1864, Edin. Dub. Austr. Belg. U. S.; not in others.)

A convenient mode of application to putrid sores has been furnished by Messrs. Pichot et Cie, Paris, in their "Papiers Carbonifères," and a softer substance called Charpie, also Sachets de Charpie Carbonifères.

CARBO LIGNI.

WOOD CHARCOAL.

Wood charred by exposure to a red-heat without access of air.

The Oak, Beech, and Hazel are chiefly employed.

(In all the Pharmacopœias; Fr. Charbon Végétal.)

Test.—When burned at a high temperature, with free access of air, it leaves not more than 2 per cent. of ash.

Medicinal Properties.

Antiseptic and absorbent. Given in cases of distension by intestinal gas, and in foul eructations; also in dyspepsia attended with flatus and acidity. Externally, as a poultice, it absorbs the fœtor of ulcers.

Dose.—20 to 60 grs.

Preparation.

CATAPLASMA CARBONIS.

Wood Charcoal, ½ oz.; Bread, 2 oz.; Linseed Meal, 1½ oz.; boiling Water,

10 oz.: soak the bread in the water near the fire, add the Linseed Meal and half the Charcoal, stirring to a soft poultice, sprinkling the remainder of the charcoal on the surface.

(Same as Brit. 1864; rather stronger than Lond.; not in others.)

CARDAMOMUM.

CARDAMOMS.

The seeds of the *Elettaria Cardamomum* contained in their capsules, which are to be removed when the seeds are employed. Cultivated in Malabar.

Medicinal Properties.

Cordial and carminative; less heating and stimulating than some others. A useful adjuvant to purgatives to prevent griping.

Dose.—Of the seeds powdered, 5 to 20 grs.

1 of fruit yields $\frac{3}{4}$ of seeds.

(In all the Pharmacopœias except Austr.)

Contained in Extractum Colocynthidis Compositum, Pulvis Cinnamomi Compositus, Pulvis Cretæ Aromaticus, Tinctura Gentianæ Composita, Tinctura Rhei, and Vin. Aloes.

Preparation.

TINCTURA COMPOSITA.

Cardamom seeds freed from their pericarps, bruised, 1; Caraway, bruised, 1; Raisins freed from their seeds, 8; bruised Cinnamon, 2; Cochineal in powder, $\frac{1}{2}$; Proof Spirit, 80: macerate forty-eight hours with $\frac{3}{4}$ of the spirit, agitating occasionally, pack in a percolator, and let it drain, pour upon it the remainder of the spirit, and when it ceases to drop, press, wash the marc with spirit to make up 80. =(1 in 80).

Dose.—$\frac{1}{2}$ to 2 drms.

(Same as Brit. 1864, and Fr.; 50 per cent. stronger than Lond. Edin. and Dub. in Cardamoms and Caraway, but weaker than Lond. and stronger than Edin. and Dub. in Cochineal; Dub. contains no Raisins; U. S. 1 in 50, contains Honey, and is made with the *fruit* of the Cardamoms; Belg. Tinctura Simplex; not in others.)

Contained in Decoctum Aloes Compositum, Mistura Ferri Aromatica, Mistura Senna Composita, Tinctura Chloroformi Composita.

CARUI FRUCTUS.

CARAWAY FRUIT.

The dried Fruit of the *Carum Carui*. Cultivated in England and Germany.

Medicinal Properties.

Aromatic, stomachic, and carminative. Used occasionally in flatulent colic, and as an adjuvant to other medicines.

(Brit. 1864, Lond. Edin. Dub. and U. S.; not in others.)

Contained in Conf. Opii, Conf. Piperis, Pulv. Opii Comp., Tinct. Cardamom Comp., and Tinctura Sennæ.

Preparations.

AQUA.

Caraway, bruised, 1; Water, 20: distil 10. =(1 in 10).

(Brit. 1864, and Lond. 1 in 8; Dub. made with essence, containing 12 minims of oil to 20 oz.; not in others.)

Dose.—1 to 2 oz.

OLEUM.

The Oil distilled in Britain, sp. g. ·946.

Added to purgative medicines to prevent griping.

Dose.—2 to 4 minims.

(Same as Brit. 1864, Lond. Dub. Belg. Pr. and U. S.; Fr. Huile Volatile de Carvi; not in others.)

CARYOPHYLLUM.

CLOVES.

The unexpanded flower-bud of the *Caryophyllus aromaticus* dried; cultivated in Penang, Bencoolen, and Amboyna.

Test.—It emits, when indented with the nail, an oil of a strong fragrant odour. Becomes black with Salts of Iron—indicating astringent matter.

(In all the Pharmacopœias; Fr. Girofles.)

Medicinal Properties.

Stimulant, aromatic, and carminative; sometimes administered in substance or infusion to correct nausea, vomiting, and flatulency, and to promote digestion. But chiefly used to qualify other medicines.

The powder contained in Infus. Aurantii Co., Mist. Ferri Aromatica, Vin. Opii.

Dose.—In substance, 5 to 10 grs.

Preparations.

INFUSUM.

Cloves, bruised, 1; boiling Distilled Water, 40: infuse half an hour, and strain. =(1 in 40).

(Same as Brit. 1864 and Dub.; rather stronger than Lond. and Edin.; U. S. 1 in 73; not in others.)

Dose.—1 to 2 oz.

Incompatibles.—Lime Water, Metallic Salts, Mineral Acids, Gelatine.

OLEUM.

The Oil distilled in Britain, sp. g. 1·034 to 1·061: is white at first, and becomes reddish-brown by keeping. Soluble in Alcohol, Ether, and strong Acetic Acid.

Used as an adjunct to purgatives; or applied to carious teeth.

Contained in Confect. Scammonii; Pil. Colocynth Co., Pil. Coloc. et Hyoscyami.

(In all the Pharmacopœias.)

Dose.—1 to 4 minims.

Incompatible.—Perchloride of Iron.

CASCARILLÆ CORTEX.

CASCARILLA BARK.

The Bark of the *Croton Eleuteria*, from the Bahamas.

Medicinal Properties.

Aromatic, stomachic, and tonic. Used in dyspepsia, chronic diarrhœa, dysentery, and in recovery from acute diseases. Formerly used in intermittent fevers, but now almost entirely superseded by Cinchona.

(In all the Pharmacopœias.)

Dose.—In powder 10 to 30 grs.

INCOMPATIBLES.—Lime Water, Metallic Salts, and Mineral Acids.

Preparations.

INFUSUM.

Cascarilla in coarse powder, 1; boiling Distilled Water, 10: infuse an hour, and strain. =(1 in 10).

(Same as Brit. 1864, and Dub.; rather stronger than Lond. and Edin.; 50 per cent. stronger than U. S.; not in others.)

Dose.—1 to 2 oz.

This infusion quickly changes, and will scarcely keep good for a day in summer.

1 oz. of Infusion is of about the same therapeutical strength as ¼ oz. of Tincture, but the Infusion is by far the most aromatic, and when it is prescribed with an aromatic Tincture keeps good.

TINCTURA.

Cascarilla, bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, and pour on the remainder of the spirit, and when it ceases to drop, wash the marc, press, filter, and make up 8. (1 in 8).

Dose.—½ to 2 drms.

(Same as Brit. 1864, Lond. Edin. and Dub. (Fr. Pr. and Belg. 1 in 5, by weight); not in others.)

This tincture is frequently prescribed with the diluted mineral acids, and then the resin is separated, which fills the mixture with minute floccules; it is therefore better to give acids in the infusion.

CASSIÆ PULPA.

CASSIA PULP.

The pulp of the pods of the purging Cassia, *Cassia Fistula*, imported from the East or West Indies.

Medicinal Properties.

Laxative. Useful in small doses for habitual costiveness. Large doses occasion nausea, flatulence, and griping; generally given in combination.

(Brit. 1864, Lond. Edin. Austr. Belg. Fr. U. S., Cassia Fistula; not in others.)

Dose.—As a laxative, 60 to 120 grs.; as a purgative, 1 to 2 oz.

Contained in Confectio Sennæ; 1 part in 8 nearly.

CASTOREUM.

CASTOR.

Preputial follicles of the Beaver dried, and the oil sacs rejected, imported from Hudson's Bay.

(In all the Pharmacopœias.)

Medicinal Properties.

Moderately stimulant and antispasmodic. In large doses it quickens the pulse, and increases the heat of the skin, but as usually employed in small doses, it chiefly affects the nervous system. Used in low forms of fever with nervous symptoms, in spasmodic diseases, in hysteria and epilepsy.

Dose.—Of the powder, 5 to 10 grs.

Preparation.

TINCTURA.

Castor, in coarse powder, 1; Rectified Spirit, 20: macerate seven days, strain, and wash the marc with spirit sufficient to make up to 20.

=(1 in 20).

Dose.—½ to 1 drm.

(Same as Brit. 1864; Lond. Edin. 1 in 14½; U. S. 1 in 15 (Austr. and Pr. 1, and 6 by weight; Belg. and Fr. 1 and 10 by weight); not in Dub.)

CATAPLASMATA.

The Cataplasms were contained in the London Pharmacopœia only, and are adopted by the Brit. Ph. with very slight modification. The formulæ will be found under the names of the substances from which they are prepared.

Page 68. CATAPLASMA CARBONIS, 1 in 28.
89. CATAPLASMA CONII, 1 powder in 14.
75. CATAPLASMA FERMENTI.—*See* Cerevisiæ, 1 in 4½.
152. CATAPLASMA LINI, 1 powder in 3½.
226. CATAPLASMA SINAPIS, 1 powder in 6.
232. CATAPLASMA SODÆ CHLORATÆ, 1 solution in 7.

Cataplasms that are not officinal are enumerated in the Index.

CATECHU PALLIDUM.

PALE CATECHU.

An extract of the leaves and young shoots of the *Uncaria Gambir*, prepared at Singapore and in the Eastern Archipelago.

It generally occurs in cubical reddish-brown pieces, porous, bitter and astringent in taste.

Solubility: entirely soluble in boiling Water; the solution, when cold, is not rendered blue by Iodine. Of 100 parts, only 60 are dissolved by cold Water, and the solution is bright. 30 parts of Isinglass precipitate the whole of the astringent matter.

Test.—Sp. g. 1·390.

(Edin. only.)

The pale Catechu being already in the Edin., the Brit. 1864 retained it with the black; but the black is the one adopted by all other Pharmacopœias, and is preferred in the arts and manufactures; it is well known to be by far superior to the pale in astringency, and is always to be had of good quality, it is therefore a matter of surprise and regret that it has been rejected from the British Pharmacopœia.

Catechucin is not precipitated by Gelatine.

Medicinal Properties.

A powerful astringent. Used chiefly in diarrhœa and some forms of atonic dyspepsia accompanied with pyrosis; also as a remote astringent for hæmorrhage and mucous discharges. Lozenges are the best medium for administering it in relaxed conditions of the uvula.

Dose.—10 to 30 grs. in powder.

INCOMPATIBLES.—The Alkalies, Metallic Salts, and Gelatine.

Preparations.

INFUSUM CATECHU.

Pale Catechu, in coarse powder, 160 grs.; Cinnamon, bruised, 30 grs.; boiling Distilled Water, 10 oz.: infuse half an hour, and strain. =(1 in 27).

(Same as Brit. 1864 and Dub.; Lond. Compositum; Edin. with Syrup; U. S.; all of nearly the same strength; not in others.)

Dose.—1 to 2 oz.

PULVIS CATECHU COMPOSITUS.

Pale Catechu, 4; Kino, 2; Rhatany, 2; Cinnamon, 1; Nutmeg, 1: mix. =(1 in $2\frac{1}{2}$).

(Same as Brit. 1864; Dub. same strength, without Rhatany; not in others.)

Dose.—15 to 30 grs. Aromatic, astringent.

TINCTURA CATECHU.

Pale Catechu, in coarse powder, $2\frac{1}{2}$; Cinnamon, bruised, 1; Proof Spirit, 20: macerate for seven days with agitation, strain, press, and filter, and add spirit to make up 20. =(1 in 8).

(Same as Brit. 1864; nearly the same as Lond. Edin. and Dub.; U. S. 1 in 10.) (Austr. 1 and 4; Belg. Fr. Tinct. Cachou, and Pr. 1 and 5, by weight.)

Dose.—$\frac{1}{2}$ to 2 drms.

TROCHISCI CATECHU.

Pale Catechu, in powder, 720 grs.; Refined Sugar, in powder, 25 oz.; Gum Arabic, in powder, 1 oz.; Mucilage of Acacia, 2 oz.; Distilled Water, a sufficiency: divide into 720 lozenges.

(Brit. 1864.)

Each lozenge contains 1 grain of Catechu.

Dose.—1 to 3 lozenges.

Not Officinal.

CATECHU NIGRUM.—BLACK CATECHU, TERRA JAPONICA, PEGU CATECHU

CUTCH.—An extract of the Acacia Catechu, dried and imported from Pegu. It generally occurs in irregularly-shaped blackish-brown masses, astringent, and bitter in taste.

Solubility. Of 100 parts, only 88 are dissolved by cold Water, the solution being very turbid. 60 parts of Isinglass precipitate the whole of the astringent matter.

Test.—Sp. g. 1·450.

(In all the Pharmacopœias except the Brit. 1867.)

Dose.—5 to 15 grs.

The pale Catechu contains only about half the astringent matter of the black.

*** As the following is advantageously used as a substitute for Catechu, it may be proper to introduce it here.

GUMMI RUBRUM.—An exudation from the bark of the *Eucalyptus rostrata*, imported from Australia.

Solubility. Of 100 parts, 90 are dissolved in cold Water, the solution being clear. 27 parts of Isinglass precipitate all the astringent matter.

This gum adheres with great pertinacity to the mucous surfaces, and it is probably on this account that its astringency is more effective than that of Catechu, although it actually contains a less amount of astringent matter.

Most useful in diarrhœa and dysentery, alone, or with Extractum Belæ Liquidum; externally for lotions, and injections for leucorrhœa, in the proportion of 1 or 2 to 20 of water.

Dose.—5 to 10 grs.

DECOCTUM.—Red Gum, ½; Water, 20; boil ten minutes and filter.

SYRUPUS.—15 grains of Gum are contained in each drachm of syrup.

Dose.—½ to 1 drm.

1 oz. of the Syrup to 9 oz. of Water makes an excellent astringent gargle. 1 to 11 for astringent injections.

TINCTURA.—120 grains to the ounce of weak Spirit (Rectified Spirit, 1, Water, 3).

Dose.—20 to 40 minims in water.

CERA ALBA.

WHITE WAX.

Yellow wax, bleached by exposure to moisture, air, and light. British and imported.

Test.—Not unctuous to the touch; does not melt under 150° F.

Medicinal Properties.

Emollient; chiefly employed as an ingredient in Ointments.

(In all the Pharmacopœias; Fr., Cire blanche.)

Contained in Unguenta Cetacei, Plumbi Subacetatis, and Simplex; also in Suppositoria and Charta Epispastica.

Preparation.

UNGUENTUM SIMPLEX.

White Wax, 2; Prepared Lard, 3; Almond Oil, 3: melt together, and

stir till it becomes solid. This is necessary, because the Wax is apt to granulate if the stirring is not continued until it solidifies. =(1 in 4).

(Same as Brit. 1864, Edin. Olive Oil, 5½, Wax, 2; U. S. Dub. and Austr., Lard, 8, Wax, 2; Belg. Lard, 11, Wax, 2; Pr. Unguentum Cereum, Olive Oil, 5, Wax, 2; Fr. Cérat Simple, Oil of Almonds, 6, Wax, 2.)

Not Officinal.

COLD CREAM.—White Wax, 1; Spermaceti, 1; Oil of Almonds, 6; Rose Water, 9, Otto of Rose to perfume it. Melt together, by means of a water-bath, the oil, spermaceti, and wax, then gradually add the rose-water, and stir till cold.

CERA FLAVA.

YELLOW WAX.

The prepared honeycomb of the hive-bee. British and imported.

Test.—Not unctuous to the touch; does not melt under 140° F.; yields nothing to cold Rectified Spirit; but is entirely soluble in Oil of Turpentine. Boiling Water in which it has been agitated, allowed to get cold, is not rendered blue by Iodine—indicating absence of flour, with which it was formerly mixed; it is, however, rarely adulterated now.

Medicinal Properties.

Chiefly used in medicine as an ingredient of plasters and ointments.

(In all the Pharmacopœias; Fr. Cire.)

Contained in several of the Emplastra and Unguenta.

CEREVISIÆ FERMENTUM.

BEER YEAST.

The ferment obtained in brewing beer. It consists of numerous microscopic round or oval confervoid cells.

Insoluble in Alcohol or Water.

Medicinal Properties.

Tonic and stimulant. May be used in low states of the nervous system. Externally to prevent the formation of boils and carbuncles. It is, however, superseded by more convenient medicines.

(Brit. 1864, Lond. Dub. Belg.; not in others.)

Dose.—(Fresh) ½ to 1 oz. every two hours, alone or with water.

Preparation.

CATAPLASMA.

Beer Yeast, 6; Flour, 14; Water (100° F.), 6; mix. Place the mass near the fire till it rises.

(Brit. 1864 and Lond. only.)

Useful in foul and sloughing ulcers.

CERII OXALAS.

OXALATE OF CERIUM.

$2CeO,C_4O_6+6HO$, or $CeC_2O_4,3H_2O$; eq. 234.

Introduced into practice by Dr. Simpson, of Edinburgh. Cerium was discovered in 1803, and is now obtained chiefly from a mineral called Cerite, by boiling it in Hydrochloric Acid, evaporating to dryness, redissolving in Water, neutralizing with Ammonia, adding Succinate of Ammonia to throw down the Iron, filtering and throwing down by Ammonia, and, lastly, dissolving the precipitate in Oxalic Acid.

Test.—10 grs. when incinerated loses 5·2 grs. in weight.

Medicinal Properties.

Sedative, tonic. Of great value in general chronic intestinal eruption, irritable dyspepsia, gastrodynia and pyrosis, in chronic vomiting, and vomiting during pregnancy. In convulsive diseases, as chorea and epilepsy, and it does not produce the discoloration of the skin, as does the use of Nitrate of Silver.

Dose.—1 to 2 grs. two or three times daily.

A new Preparation.

CETACEUM.

SPERMACETI.

A concretion prepared from the oily matter in the head of the *Physeter macrocephalus*, or sperm whale, inhabiting the Pacific and Indian Oceans.

Nearly pure Cetine, separated by cooling, filtration and pressure, from the oil, and afterwards purified.

Soluble in Fixed Oils and in boiling Ether or Alcohol.

Test.—Scarcely unctuous to the touch; does not melt under 100° F.

Contained in Charta Epispastica.

Medicinal Properties.

Emollient and demulcent, in chronic diarrhœa. Externally it is much employed for ointments and cerates.

(In all the Pharmacopœias; Fr. Blanc de Baleine.)

Dose.—20 to 60 grs. boiled in milk, two or three times daily.

Preparation.

UNGUENTUM.

Spermaceti, 5; White Wax, 2; Almond Oil, 20, or a sufficiency: stir constantly till it cools.

The author finds 17 of Oil sufficient in summer.

(Same as Lond. and Belg.; Dub. made with Lard instead of Oil; not in others.

A cool dressing, applied on lint.

Not Officinal.

MISTURA CETACEI.—Spermaceti, 60 grs.; Proof Spirit, 15 minims: finely pulverize the Spermaceti by aid of the spirit, and add by degrees half the yolk of an egg, at first only sufficient to make a stiff paste, which should be made very smooth by diligent trituration, then the rest, and make up with water to 4 ounces.

Dose.—1½ oz. Given for coughs, and irritation of the mucous membrane.

CETRARIA.

ICELAND MOSS.

The entire Lichen, *Cetraria Islandica*, native of the North of Europe.

Medicinal Properties.

Demulcent, nutritious, and slightly tonic. Well calculated for affections of the mucous membrane of the lungs and bowels with debility of the digestive organs or system generally. Useful in chronic catarrhs and other chronic pulmonary affections attended with copious purulent expectoration, in dyspepsia, chronic dysentery and diarrhœa, and in debility succeeding acute disease.

(In all the Pharmacopœias.)

Preparation.

DECOCTUM.

Iceland Moss, 1; first wash with cold water, then add Distilled Water, 30: boil ten minutes and strain 20. =(1 in 20).

(Same as Brit. 1864, Lond. Dub. and U. S.; Belg. 1 in 25; not in others.)

Dose.—1 to 2 oz.

Not Officinal.

ICELAND MOSS JELLY.—Iceland Moss, 1; Water, 10; boil down to 6, strain and add Sugar, 2.

CHARTA EPISPASTICA.

See CANTHARIDES, Page 65.

CHIRATA.

CHIRETTA.

The entire plant of the *Ophelia Chirata*, collected in Northern India, when the fruit begins to form.

Medicinal Properties.

The same as Gentian, but is a purer bitter.

(Brit. 1864, Edin. Dub. U. S.; not in others.)

Preparations.

INFUSUM.

Chiretta, cut small, 1; Distilled Water (at 120° F.), 40: infuse half an hour and strain. =(1 in 40).

(Same as Brit. 1864; Edin. and Dub. with boiling water; not in others.)

Dose.—1 to 2 oz.

Salts of Iron may be given in this infusion when a strong bitter is desired as a vehicle.

TINCTURA.

Chiretta, cut small and bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit; when it ceases to drop, press, and wash the marc with spirit to make up 8. =(1 in 8).

(Same as Brit. 1864 and Dub.; not in others.)

Dose.—15 to 60 minims; Brit. Ph. dose ½ to 2 drms.

CHLORI LIQUOR.

SOLUTION OF CHLORINE.

Chlorine Gas dissolved in half its volume of water, and constituting 0·006 of the weight of the solution.

A yellowish-green fluid, smelling strongly of Chlorine.

Hydrochloric Acid, 6; Black Oxide of Manganese, in fine powder, 1; Distilled Water, 34: put the Manganese into a gas bottle, pour on it the acid mixed with 2 of the water; apply a gentle heat, and pass the gas through a bottle containing 2 more of water into the remainder of the water contained in a large bottle, which is to be kept cold till the gas ceases to come over; the bottle should then be closed by the hand and shaken till the gas is absorbed.

Test.—Sp. g. 1·003. Evaporated it leaves no residue. When 20 grains of Iodide of Potassium, dissolved in 1 ounce of distilled water, are added to 1 fluid ounce (439 grains by weight) of the preparation, the mixed solution acquires a deep red colour, which requires for its discharge 750 grain-measures of the volumetric solution of Hyposulphite of Soda, corresponding to 2·66 grains of Chlorine. Test explained under CALX CHLORATA.

Medicinal Properties.

Stimulant and antiseptic. Useful in advanced stages of scarlatina, typhoid fever, and chronic affections of the liver. Diluted, as a gargle in smallpox, scarlatina, and putrid sore-throat. As a wash for ulcers, cancerous sores, buboes, and large abscesses. Dr. Scott, of India, gave it for biliary obstructions in conjunction with the Nitrohydrochloric Acid baths.

(In all the Pharmacopœias; same as Lond. and Belg.; Pr. contains 0·366 per cent. of Gas; Edin. made by agitating Red Oxide of Lead with Muriate of Soda and Sulphuric Acid.)

Dose.—10 to 20 minims, in a wineglass of water.

VAPOR CHLORI.—*See* CALX CHLORATA, Page 57.

ANTIDOTES.—In case of poisoning by Chlorine water, the antidotes are, White of Egg, Milk, Flour.

CHLOROFORMUM.

CHLOROFORM.

C_2HCl_3, or $CHCl_3$, eq. 119·5.

Syn. TERCHLORIDE OF FORMYL.

It is a colourless, limpid, and volatile fluid, the vapour of which is not inflammable, obtained by distillation from a mixture of Chloride of Lime, Caustic Lime, and weak Spirit, the heat being very carefully applied.

Solubility, in Rectified Spirit, 10 in 6; in Ether, 10 in 70; in Water, 10 in 2000; freely in Olive Oil and Spirit of Turpentine. Will not dissolve in Glycerine.

Chloroform has extensive solvent powers, being capable of dissolving Caoutchouc, Gutta-percha, Mastic, Elemi, Tolu, Benzoin, and Copal. Amber, Sandarac, Lac, and Wax, are only partially soluble. It also dissolves Iodine, Bromine, most of the organic alkaloids, the fixed and volatile oils, most resins and fats. It dissolves Sulphur and Phosphorus sparingly.

Test.—Sp. g. 1·496. Is not coloured on its being shaken with Sulphuric Acid. Dropped into water, it suddenly sinks and remains without opacity. It evaporates speedily, and leaves no residue and no unpleasant odour. Evolves no gas when Potassium is dropped into it.

(Same sp. g. as Brit. 1864 and Dub.; Lond. Belg. 1·480; U. S. 1·450 to 1·490; Austr. 1·490; Pr. 1·492 to 1·496; not in others.)

Contained in Linimentum Belladonnæ et Chloroformi (not officinal).

NOTE.—Chloroform should not be prescribed with weak spirits or Glycerine, as it separates. Mixed with strong spirits, Camphor Liniment, Soap Liniment, Olive Oil or oil of Turpentine, it dissolves perfectly.

Thus: Chloroform, Oil Turpentine, of each 1, Soap Liniment, 2, makes a clear liniment.

Medicinal Properties.

Internally, a sedative, narcotic, and antispasmodic. May be given as an antiperiodic, when Bark and Quinine fail to effect a cure. Externally, stimulant in senile gangrene, and sloughing ulcers. The vapour is often applied to the eye, and also to the rectum or vagina. Its chief use, however, is to produce anæsthesia by inhalation during surgical operations, and the quantity required for each inhalation must depend on the duration of the operation to be performed.

Dose.—1 to 5 minims, with yolk of egg and mucilage, in syrup, or in a teaspoonful of brandy. *British dose.*—3 to 10 minims.

ANTIDOTES.—In case of overdose of Chloroform, the antidotes are, fresh pure air and artificial respiration.

Preparation.

LINIMENTUM.

Chloroform, 1; Liniment of Camphor, 1: mix. =(1 in 2).

The Oil in the Camphor Liniment prevents the evaporation of the Chloroform.

Stimulating on application to a tender skin.

(Brit. 1864; U. S. Chloroform, 2; Olive Oil, 4½; not in others.)

SPIRITUS.

Chloroform, 1; Rectified Spirit, 19: dissolve. =(1 in 20).

(Brit. 1864.)

Formerly called Chloric Ether, and of various strengths.

(U. S. 1 in 10; not in others.)

Test.—Sp. g. ·871.

Dose.—10 to 60 minims. 10 or 20 minims is frequently prescribed to give a sweetness to draughts, and to cover nauseous flavours.

TINCTURA COMPOSITA.

Chloroform, 2; Rectified Spirit, 8; Compound Tincture of Cardamoms, 10: mix. =(1 in 10).

Dose.—20 to 60 minims.

The Chloroform will separate if this tincture is prescribed in usual mixtures.

Not Officinal.

Liquor Chloroformi Camphoratus.—Camphor, 1; Chloroform, 2: dissolve.

A remedy for toothache, and topically applied for rheumatism.

Liquor Chloroformi Compositus.—Chloroform, 4 oz.; Ether, 1 oz.; Rectified Spirit, 4 oz.; Treacle, 4 oz.; Extract of Liquorice, 2½ oz.; Muriate of Morphia, 8 grs.; Oil of Peppermint, 16 minims; Syrup, 17½ oz.; Prussic Acid (2 per cent.), 2 oz.: dissolve the Muriate of Morphia and the Oil of Peppermint in the Rectified Spirit; mix the Chloroform and Ether with this solution; dissolve the Extract of Liquorice in the Syrup, and add the Treacle; shake these two solutions together and add the Prussic Acid.

This has been represented to the author as the composition of the popular medicine called Chlorodyne, and he has published it in order that those who object to prescribe proprietary medicines may be able to prescribe a compound under the above name with a knowledge of its composition.

Since, however, the British Pharmacopœia has introduced a preparation bearing the name of Tinctura Chloroformi Composita, it is thought desirable to call the representative of "Chlorodyne" *Liquor* Chloroformi Compositus.

Dose.—5 to 10 minims.

Unguentum.—Chloroform, 1; Lard, 2: blend quickly by trituration.

Vapor.—Chloroform, 15 minims for one inhalation.

Tetrachloride of Carbon, sp. g. 1·590, resembles Chloroform in its characters and properties, and is used in the place of Chloroform to produce anæsthesia; its action is said to be more effective and pleasanter to the patient.

CINCHONA.

CINCHONA BARK.

From Peru and the western coast of South America.

The Peruvian Bark was known in Europe so early as 1640, on account of its having cured the Countess of Chinchon of a fever. We are ignorant of its early history, and how the Spaniards in Peru became acquainted with its virtues; but the Jesuits secretly conveyed it from Peru to Spain, hence it was called the Jesuits' Bark. Little was further known of it until the time of La Condamine, who visited Peru in 1738, and after whom Humboldt and Bonpland named the plant the *Cinchona Condaminea*. It was long supposed that only one species existed; a vast number, however, have been discovered, all of which possess medicinal properties, though varying much, both accord-

ing to their species and the locality of their growth. It has been distinguished in our Pharmacopœias by its colour. The names of only three are now retained.—*Cinchona flava*, *C. pallida*, and *C. rubra*.

The YELLOW BARK of Calisaya contains a fatty matter, cinchonic red, a yellow colouring-matter, Tannin or soluble red colouring-matter, Starch, Lignin, Kinate of Lime, and *Kinate of Quinia, with a comparatively small proportion of Kinate of Cinchonia*. Procured from the forests of Southern Peru.

The PALE BARK of Loxa (*C. Condaminea*) contains the fatty matter, the insoluble red colouring, the yellow colouring, Tannin, Gum, Starch, Lignin, Kinate of Lime, *Kinate of Cinchonia, with a very minute portion of Kinate of Quinia*. From the forests of Loxa, in the republic of Ecuador.

RED BARK contains the fatty matter, a large quantity of the cinchonic red, the yellow colouring-matter, Tannin, Starch, Lignin, Kinate of Lime, and *a large proportion both of Kinate of Quinia and Kinate of Cinchonia*. From the forests at the foot of Chimborazo.

Medicinal Properties.

Cinchona Bark is a decided tonic, with some degree of astringency. It is especially useful in fevers of a remittent and intermittent character, when it should be given, in full doses, shortly before the cold stage. It has been found highly beneficial in many chronic cases, although intermissions do not occur; chronic and pulmonary catarrh, chronic diarrhœa, and in every case of direct debility. It is the most valuable remedy in neuralgia, and one of the most reliable medicines to relieve erysipelas in convalescence from acute diseases. The Pale Bark appears to be best suited to commence with when the stomach is weak and irritable, containing chiefly Quinidine and Cinchonine. The Yellow, however, is a more reliable tonic when the stomach will bear its use. The Red Bark, containing both Cinchonine and Quinine, has been thought, by Dr. Rigby, to be on the whole the most serviceable.

CINCHONÆ FLAVÆ CORTEX.

YELLOW CINCHONA BARK.

The Bark of the *Cinchona Calisaya*, collected in Bolivia and Southern Peru.

It yields 3 to 3½ per cent. of Sulphate of Quinine.

The "Monopoly" Bark is most valued, and should be procured if possible. There are several kinds of Yellow Bark which are of an inferior kind. It would be well therefore to try them by the Pharmacopœia test, which is as follows:—

Test.—Boil 100 grains of the Bark, reduced to a very fine powder, for a quarter of an hour, in 1 fluid ounce of distilled water, acidulated with 10 minims of Hydrochloric Acid, and allow it to macerate for twenty-four hours. Transfer the whole to a small percolator, and after the fluid has ceased to drop, add at intervals about 1½ ounce of similarly acidulated water, or add until the fluid which passes through is free from colour. Add to the perco-

lated fluid Solution of Subacetate of Lead until the whole of the colouring-matter has been removed, taking care that the fluid remains acid in reaction. Filter and wash with a little Distilled Water. To the filtrate add about 35 grains of Caustic Pôtash, or as much as will cause the precipitate which is at first formed to be nearly redissolved, and afterwards 6 fluid drachms of pure Ether. Then shake briskly, and, having removed the Ether, repeat the process twice with 3 fluid drachms of Ether, or until a drop of the Ether employed leaves, on evaporation, scarcely any perceptible residue. Lastly, evaporate the mixed ethereal solutions in a capsule. The residue, which consists of nearly pure Quinia, when dry, should weigh not less than 2 grains, and should be readily soluble in dilute Sulphuric Acid.

Dose.—15 grs. as a tonic; 60 to 120 grs. in ague. May be combined with mineral acids.

INCOMPATIBLES.—Ammonia, Lime Water, Metallic Salts, and Gelatine.

Preparations.

DECOCTUM.

Yellow Cinchona Bark, in coarse powder, $1\frac{1}{4}$; Distilled Water, 20: boil ten minutes; when cold, strain and pour on the marc sufficient water to make up 20. =(1 in 16).

(Same as Brit. 1864, Lond. Edin. and U. S.; Belg. 1 in 10; not in others.)

The decoction thus made extracts only about half the active principle of the Bark; the marc retains about the same quantity of Quinine as is found in the decoction.

Dose.—1 to 2 oz.

EXTRACTUM LIQUIDUM.

Yellow Cinchona Bark, in coarse powder, 16; Distilled Water, a sufficiency; Rectified Spirit, 1: macerate the bark in 40 of water for twenty-four hours, then pack in a percolator, and add water until 240 have passed through, or until the bark is exhausted. Evaporate the liquor to 20 at a temperature not exceeding 160°, then filter and continue the evaporation to 3 or until the sp. gr. of the liquid is 1·200; when cold, add the spirit gradually, constantly stirring. Sp. g. 1·100.

1 part of this extract is equal to 4 of Bark.

(Same as Brit. 1864; nearly same as Infusum Cinchonæ Spissatum, Lond.; U. S. $\frac{1}{8}$ the strength; not in others.) An excellent preparation.

Dose.—10 to 30 minims.

INFUSUM.

Yellow Cinchona Bark, in coarse powder, 1; boiling Distilled Water, 20: infuse two hours, and strain. =(1 in 20).

(Same as Brit. 1864 and Lond.; Edin. Infusum Cinchonæ; U. S. with Acid; Fr. with Liquorice; not in others.)

Dose.—1 to 2 oz.

TINCTURA.

Yellow Cinchona Bark, in coarse powder, 4; Proof Spirit, 20: macerate orty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit, and when it ceases to drop, press, and wash the marc with spirit to make 20. =(1 in 5).

(Same as Brit. 1864, Lond. Tinctura Cinchonæ, and Edin.; U. S. Tinctura Cinchonæ, 1 in 5; (Austr. Tinctura Chinæ Simplex, 1 in 6; Belg. Tinctura Chinæ Flava, Fr. Teinture de Quinquina, 1 in 5 by weight;) not in Dub.)

Dose.—1 to 2 drms.

QUINIÆ SULPHAS.—*See* QUINIÆ SULPHAS, page 205.

CINCHONÆ PALLIDÆ CORTEX.

PALE CINCHONA BARK.

The Bark of the *Cinchona Condaminea*, collected about Loxa, in Ecuador.

Yields ·57 per cent. Quinidia and ·6 per cent. of Cinchonia.

Test.—200 grains of the bark treated in the manner directed in the test for Yellow Cinchona Bark, with the substitution of Chloroform for Ether, should yield not less than 2 grains of alkaloids; Brit. 1867 states 1 grain of alkaloids; chiefly Cinchonia and Quinidia, which are dissolved by Chloroform; Ether dissolving only Quinia.

Dose.—10 to 60 grs.

Contained in Mist. Ferri Aromatica.

Preparation.

TINCTURA CINCHONÆ COMPOSITA.

Pale Cinchona Bark, in coarse powder, 4; Bitter Orange Peel, cut small and bruised, 2; Serpentary, bruised, 1; Saffron, ¼; Cochineal, ⅛; Proof Spirit, 40: macerate forty-eight hours with 30 of spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remainder of the spirit; when it ceases to drop, press, and wash the marc with spirit to make up 40. =(1 in 10).

(Same as Brit. 1864, Lond. Edin. Dub. Belg. Fr. and U. S.; Pr. Tinct. Chinæ Comp. with Gentian, Orange, and Cinnamon water; not in others.)

Dose.—½ to 2 drms.

CINCHONÆ RUBRÆ CORTEX.

RED CINCHONA BARK.

The bark of the *Cinchona succirubra*, collected on the western slopes of Chimborazo.

Red Bark yields 2 per cent. of Sulphate of Quinia and 1 per cent. of Sulphate of Cinchonia.

Test.—100 grains of the bark, treated in the manner directed in the test for Yellow Cinchona Bark with the substitution of Chloroform for Ether, yield not less than 2 grains of alkaloids; Brit. 1867 1·5 grain of alkaloids. Chloroform dissolves all the alkaloids of Cinchona Bark.

INCOMPATIBLES.—Ammonia, Lime Water, Metallic Salts, Gelatine.

CINNAMOMI CORTEX.

CINNAMON BARK.

The inner bark of shoots from the truncated stock of the *Cinnamomum Zeylanicum*, imported from Ceylon, and distinguished in commerce as Ceylon Cinnamon.

(In all the Pharmacopœias; Austr. and Pr. *Cinnamomum acutum;* Fr. Cannelle.)

Medicinal Properties.

Warm and cordial to the stomach, carminative and astringent, chiefly used as an adjuvant to other medicines. Often employed in diarrhœa, with chalk. Efficacious in internal hæmorrhage.

Dose of the powder, 10 to 20 grs.

Contained in Acidum Sulphuricum Aromaticum, Decoctum Hæmatoxyli, Infusum Catechu, Pulv. Catechu Co., Pulv. Cretæ Aromaticus, Pulv. Kino Compositus, Tinct. Cardam. Co., Tinct. Catechu, Tinctura Lavandulæ Comp., Vinum Opii.

Preparations.

AQUA.

Cinnamon, bruised, 1; Water, 16; distil, 8. =(1 in 8).

(Same as Brit. 1864, Lond. and Edin.; Dub. made with essence; U. S. Pr. and Belg. 1 in 10; Austr. 1 in 6; Fr. Eau de Cannelle, 1 in 4.)

Dose.—1 to 2 oz.

OLEUM.

The Distilled Oil imported. Yellowish when recent, gradually becoming red.

(In all the Pharmacopœias.)

Possesses the carminative qualities of Cinnamon without its astringency.

Dose.—1 to 4 minims in pill, with powdered Mastich, or in sugar, or emulsion.

PULVIS COMPOSITUS. AROMATICUS of Edin.

Cinnamon, 1; Cardamoms, 1; Ginger, 1: mix. =(1 in 3).

Dose.—3 to 10 grs.

(Same as Edin. and Belg.; the Pulvis Cinnamomi Compositus of Lond. contained Cinnamon, Cardamoms, Ginger, and Long Pepper; Dub. and U. S. Cinnamon, 2, Ginger, 2, Cardamoms, 1, Nutmeg, 1; Pr. Cinnamon, 2, Cardamoms, 1, Ginger, ½; not in others.)

TINCTURA.

Cinnamon, in coarse powder, 1; Proof Spirit, 8; macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit; when it ceases to drop, press, and wash the marc with spirit to make up 8. =(1 in 8).

Dose.—1 to 2 drms.

(Same as Brit. 1864; Lond. and Edin. 1 in 11½; U. S. 1 in 10; (Austr. Belg. and Fr. 1 in 5 by weight; Pr. 1 and 5 by weight;) not in Dub.)

COCCUS.

COCHINEAL.

The female insect, *Coccus Cacti*, dried; reared in Mexico and Teneriffe.

(In all the Pharmacopœias; Austr. Belg. Pr. Coccionella; Fr. Cochenille.)

Medicinal Properties.

Anodyne, given in whooping-cough.

Preparation.

TINCTURA.

Cochineal, in powder, 1; Proof Spirit, 8: macerate seven days; strain, and wash the marc with spirit to make up 8. =(1 in 8).

(Same as Brit. 1864, Dub. 1 in 10; (Austr. and Belg. 1 in 5; Fr. 1 and 5; by weight;) not in others.)

Dose.—30 to 90 minims twice a day. (Used chiefly for colouring medicines.)

Not Officinal.

MIXTURE FOR WHOOPING-COUGH.—Cochineal, 10 grs.; Subcarbonate of Potash, 20 grs.; Sugar, ½ oz.; Water, 4 oz.: rub together, and strain.

Dose.—15 minims four times a day for a child one year old; 30 minims two years; 60 minims four years.

Boiled apples in milk given for the food.

COLCHICI CORMUS.

COLCHICUM CORM.

The fresh corm or bulb of the *Colchicum autumnale*, collected about the end of June, stripped of its coats, sliced transversely, and dried at a temperature not exceeding 150° F.

Test.—Best tested by its bitterness.

Medicinal Properties.

Produces increased action of some of the secreting organs; the action of the skin is also increased; that of the heart diminished. Employed chiefly in gout, possessing a power of controlling the pain and inflammation. Affords relief in acute rheumatism and other inflammatory affections. May be used combined with other purgatives in cases of imperfect action of the liver. It has also been used in dropsy. It is apt to produce depression if given on an empty stomach.

Dose of the powder, 2 to 8 grs. every four or six hours.

(Fr. Colchique bulb.)

Preparations.

EXTRACTUM COLCHICI.

The expressed juice of fresh Colchicum Corms, cleared of deposit, boiled, strained, and evaporated to a proper consistence at a temperature of 160° F.

100 pounds of Corms yield 4 pounds of Extract.

Dose.—1 to 2 grs.

(Same as Brit. 1864, and Lond.; not in others.)

EXTRACTUM COLCHICI ACETICUM.

Crushed fresh Corms, previously peeled, 19; Acetic Acid, 1: stir together, press, boil, and strain through flannel, and evaporate to a soft extract.

(Same as Brit. 1864, Lond. and Edin., but without the starch; Dub. and U.S. made of Dried Corms; not in others.)

100 pounds of Corms yield 5½ pounds of Extract.

Dose.—1 to 2 grs., in pill, with an equal weight of Liquorice Powder.

Frequently prescribed with Dover's Powder to relieve painful gout.

VINUM COLCHICI.

Colchicum Corms, dried and sliced, 4; Sherry, 20: macerate seven days, and strain. =(1 in 5).

(Same as Brit. 1864, Lond. and Edin.; U. S. 1 in 2½; not in others.)

Dose.—10 to 30 minims.

INCOMPATIBLES.—Tincture of Iodine, Guaiacum, and all astringent preparations.

ANTIDOTES.—In case of poisoning with Colchicum, emetics followed by demulcent drinks and, if coma be present, Brandy, Ammonia, Coffee, and other powerful stimulants may be given.

COLCHICI SEMINA.

COLCHICUM SEEDS.

The seed fully ripe.

Medicinal Properties.

Similar to those of the corm or bulb, but considered by some to be superior both in certainty of effect and in mildness of operation.

Preparation.

TINCTURA COLCHICI SEMINUM.

Colchicum Seed, bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remainder of the spirit; when it ceases to drop, wash the marc with spirit to make up 8. =(1 in 8).

(Same as Brit. 1864, Lond. Edin. and Dub.; U. S. 1 in 7; (Austr. and Belg. 1 in 5; Fr. 1 and 10, by weight;) not in others.)

Dose.—15 to 30 minims.

Not Officinal.

TINCTURA COLCHICI COMPOSITA (Lond.).—Colchicum Seeds, bruised, 1; Aromatic Spirit of Ammonia, 8: macerate for seven days, then press and strain.

Dose.—15 to 30 minims.

TINCTURA COLCHICI FLORUM.—Fresh Juice of the Flowers, 2; Brandy, 1.

Dose.—10 to 30 minims. This preparation closely resembles the Eau Médicinale.

VINUM SEMINIS COLCHICI (Pr.).—Seeds, 5; Sherry wine, 24: digest eight days.

Dose.—20 minims.

COLLODIUM.

COLLODION.

Pyroxylin, $C_{36}8NO_4H_{22}O_{30}$, dissolved in Ether mixed with one-third of its volume of Rectified Spirit.

The Pyroxylin as made with Nitric Acid sp. g. 1·500 is explosive, and not soluble; but if made with Nitric Acid sp. g. 1·420, it is then soluble as above described.—*See* PYROXYLIN.

Pyroxylin, 1; Ether, 36; Rectified Spirit, 12: mix the Ether and Spirit, and add the Pyroxylin. In a few days decant the clear solution.

(U. S. Pyroxylin, 1; Ether, 28; Rectified Spirit, 4. Belg. Pyroxylin, 1; Ether, 29; Rectified Spirit, 3. Pr. Pyroxylin, 1; Ether, 22; Rectified Spirit, 3.)

Test.—Colourless and highly inflammable, with ethereal odour; it dries rapidly upon exposure to the air, and leaves a thin transparent film, insoluble in Water or Rectified Spirit. Poured on the skin, contracts in drying.

(Brit. 1864.)

COLLODIUM FLEXILE.

Collodion, 48; Canada Balsam, 2; Castor Oil, 1: mix. Applied to burns, ulcers, and abrasions of the skin.

Medicinal Properties.

Chiefly used for coating diseased or wounded parts with a protecting film. Applied to erysipelas when caused by external injury, such as wounds, etc.

Not Officinal.

STYPTIC COLLOID.—DR. RICHARDSON'S. A Saturated Solution of Tannic Acid and Xyloidine or Gun-cotton in Absolute Alcohol and Pure Ether. In the first step of the process, the Tannic Acid, rendered as pure as it can be, is treated with Absolute Alcohol, and digested in it for several days. Then the Pure Ether, also absolute, is added until the whole of the thick Alcoholic Mixture is rendered quite fluid. Next the Xyloidine is added until it ceases readily to dissolve. A little Benzoin may be added to give an agreeable odour to the Colloid.

It can be applied directly with a brush, or mixed with an equal quantity of Ether and used in the form of spray.

COLOCYNTHIDIS PULPA.

COLOCYNTH PULP.

The dried and decorticated fruit of the *Citrullus Colocynthis*, freed from the seeds; imported chiefly from Smyrna, Trieste, France, and Spain.

(In all the Pharmacopœias; Fr. Coloquinte.)

Medicinal Properties.

It is a powerful drastic, hydragogue carthartic, dangerous in large doses. Used in obstinate constipation.

Dose.—2 to 8 grs. Not often prescribed alone, generally in combination as in Pil. Coloc. Co.

Preparations.

EXTRACTUM COMPOSITUM.

Colocynth, free from seeds, 6; Extract of Socotrine Aloes, 12; Scammony, or Resin of Scammony, in powder, 4; Hard Soap, in powder, 3; Cardamoms, freed from the capsules, in fine powder, 1; Proof Spirit, 160: macerate the Colocynth in the spirit for four days; press out the tincture, distil off the spirit, and add to it the Extract of Aloes, the Soap, and the Scammony; then evaporate the residue by a water bath to a pilular consistence, adding the Cardamoms towards the end of the process.

The product weighs 24, therefore in every 6 of Extract. Coloc. Compos. there is the power of $1\frac{1}{2}$ of pulp=$\frac{1}{2}$ Simple Extract, 3 Aloes, 1 Scammony, $\frac{3}{4}$ Hard Soap, $\frac{1}{4}$ Cardamoms, $\frac{1}{2}$ Water.

(Same as Brit. 1864 and Lond.; not in others.)

This preparation was called Pil. Coloc. Comp. in the last edition of the Lond. Ph., but in former editions it was called Compd. Extract, a name most appropriate and by which it was called in Brit. 1864.

Dose.—2 to 5 grs. with 2 or 3 grs. of Extract of Hyoscyamus, to prevent griping.

PILULA COMPOSITA.

Colocynth in powder, 1; Barbadoes Aloes, in powder, 2; Scammony, in powder, 2; Sulphate of Potash, in powder, $\frac{1}{4}$; Oil of Cloves, $\frac{1}{4}$; Distilled Water, a sufficiency (about $\frac{1}{4}$): mix. Dr. Gregory's favourite pill.

=(1 in 6).

(Same as Brit. 1864; not in Lond. (the London Pill is identical with Extr. Col. Comp.); same as Edin. Pil. Colocynthidis, except as regards the Socotrine Aloes and Rectified Spirit; contains twice as much Scammony as Dub.; not in others.)

Dose.—5 to 10 grs.

Made with Water as directed the pill soon becomes hard—Syrup or Glycerine would have been better.

PILULA COLOCYNTHIDIS ET HYOSCYAMI.

Colocynth, in powder, 1; Barbadoes Aloes, in powder, 2; Scammony, in powder, 2; Sulphate of Potash, in powder, $\frac{1}{4}$; Oil of Cloves, $\frac{1}{4}$; Extract of Hyoscyamus, 3; Distilled Water, a sufficiency: mix.

=(Pil. Coloc. Co. 6; Extr. Hyos. 3)

(Same as Brit. 1864; nearly the same as Edin.; not in others.)

Dose.—5 to 10 grs.

CONFECTIONES.

CONFECTIONS.

The following Confections, which were in previous Pharmacopœias, are now omitted:—

Confectio Amygdalæ (now called *Pulvis Amygdalæ Compositus*), Confectio Aromatica (now *Pulvis Cretæ Aromaticus*), Confectio Aurantii, Confectio Cassiæ, Confectio Catechu, Confectio Rutæ.

The following are now contained in the British Pharmacopœia, the formulæ for which will be found in this volume under the names of the substances from which they are prepared:—

Page 176. CONFECT OPII. Dose, 5 to 20 grs.

185. CONFECTIO PIPERIS. { Same strength as Lond. and Edin., but contains Caraway instead of Elecampane and Fennel. Dose, 1 to 2 drms.

211. CONFECTIO ROSÆ CANINÆ.
212. CONFECTIO ROSÆ GALLICÆ. } Dose, 1 drm. or more.

220. CONFECTIO SCAMMONII. Same as Dub. Dose, 10 to 30 grs.

223. CONFECTIO SENNÆ. Same strength as Lond. Edin. and Dub., but the ingredients differ in their condition. Dose 1 to 2 drms.

241. CONFECTIO SULPHURIS. Dub. modified. Dose, 1 to 2 drms.

247. CONFECTIO TEREBINTHINÆ. Dub. Dose, 1 to 3 drms. for adults; 1 drm. for children.

CONII FOLIA.

HEMLOCK LEAVES.

The fresh leaves and branches of the *Conium maculatum*, gathered from the wild British plants when the fruit begins to form; and the leaves carefully dried.

Test.—The leaf rubbed with Caustic Potash gives out strongly the odour of Conia.

Medicinal Properties.

Powerfully narcotic; anodyne, antispasmodic, and deobstruent. Used in chronic enlargement of the liver, chronic rheumatism, syphilis, neuralgic affections; allays the cough in bronchitic affections, pertussis, and phthisis, In the case of poisoning animals by Hemlock the brain is found free from engorgement, which shows that its action on that organ must be very different from the action of Opium. May be applied externally in the form of a cataplasm to ease pain, especially in cancer.

Dose.—3 to 10 grs. in powder.

Preparations.

CATAPLASMA.

Hemlock Leaf, in powder, 1 oz.; Linseed Meal, 3 oz.; boiling Water, 10 oz.: mix the ingredients and add them to the water gradually, constantly stirring. (For 1 Cataplasm).

(Brit. 1864; Lond. made with Extract.)

EXTRACTUM.

Inspissated juice of the fresh plant, prepared as directed for Extractum Belladonnæ.

100 lb. plant yield 50 lb. juice = 5½ lb. extract; 100 lb. leaves, when dried, weigh 21 lb.

(Same as Brit. 1864, Lond. Edin. Dub. and U. S.; Austr. Extr. Siccum; Fr. Extrait de Ciguë, from clear juice, also with Proof Spirit; not in others.)

Dose.—4 to 8 grs.

PILULA COMPOSITA.

Extract of Hemlock, 5; Ipecacuanha, 1; Treacle sufficient to form a mass.

Dose.—5 to 10 grains.

(Same as Lond.; not in others.)

SUCCUS.

Express the juice from bruised fresh leaves; to every 3 measures add 1 of Rectified Spirit. Filter after seven days.

12 minims = 1 grain of extract.

(Brit. 1864; Belg. clarified, but without spirit; Fr. without spirit; not in others.)

Dose.—30 to 60 minims.

VAPOR.—INHALATION.

Extract of Hemlock, 1; Solution of Potash, 1; Distilled Water, 10.

Put 20 minims of the mixture on a sponge, in a suitable apparatus, so that the Vapour of hot water passing over it may be inhaled.

New preparation.

INCOMPATIBLES.—Caustic Alkalies, Vegetable Acids, and Astringents.

ANTIDOTES.—In case of poisoning by Hemlock, emetics followed by stimulants internal and external.

CONII FRUCTUS.

HEMLOCK FRUIT.

The ripe fruit dried.

Medicinal Properties.

Narcotic and somewhat sedative to the circulation.

Preparation.

TINCTURA.

Hemlock Fruit, dried and bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit; when it ceases to drop, wash the marc with spirit to make up 8. =(1 in 8).

(Same as Brit. 1864; Lond. with dried leaves; Edin. fresh leaves and Cardamoms; Belg. 1 in 4½; Fr. and U. S. dried and fresh leaves; not in others.)

Dose.—½ to 1 drm.

Used in the same cases as Conii Folia.

(Brit. 1864.)

COPAIBA.

COPAIVA.

The Oleo-Resin obtained by incision from the trunk of the *Copaifera multijuga*, chiefly from the valley of the Amazon.

Solubility, entirely in Rectified Spirit, Ether, and the fixed and volatile oils. Soluble in an equal volume of Benzole, insoluble in water; does not gelatinize at 270°; is not fluorescent.

Test.—Sp. g. ·950 to 1·000. Dissolves one-fourth of its weight of Carbonate of Magnesia by the aid of heat, and remains transparent.

(In all the Pharmacopœias; Fr. Baume de Copahu.)

Medicinal Properties.

Stimulant. Acts upon the mucous membrane, more particularly on that

of the genito-urinary organs and of the rectum. Used in gonorrhœa and gleet. Useful in chronic bronchitis when there is excessive mucous secretion.

To be avoided in febrile states of the system.

Dose.—20 to 60 minims three times a day.

Given floating on Aromatic water, or sometimes with Spirit of Nitrous Ether. A less disagreeable form is that of emulsion, prepared by rubbing the Copaiba first with mucilage, or the yolk of an egg and sugar, and then with some aromatic water.

Both Copaiba and the Oil can be rendered emulsive by trituration with mucilage. 1¼ oz. of mucilage should be used for every ounce of Copaiba, and either Cinnamon or Peppermint Water, with Tinct. of Orange or Ginger, covers the unpleasant taste. They are sometimes put into capsules.

Preparation.

OLEUM.

The Oil distilled from Copaiva. Colourless, or pale yellow.

(Brit. 1864, Lond. Edin. and U. S.; not in others.)

Dose.—5 to 30 minims in emulsion with mucilage or yolk of egg.

CORIANDRI FRUCTUS.

CORIANDER FRUIT.

The ripe fruit of the *Coriandrum sativum* dried; cultivated in Britain.

Medicinal Properties.

Stimulant, aromatic, and carminative.

(In all the Pharmacopœias.)

Dose.—20 to 60 grs.

Contained in Confectio Sennæ, Mistura Gentianæ, Syr. Rhei, Tinctura Rhei Tinct. Senna.

Preparation.

OLEUM.

The Oil distilled in Britain from the Fruit.

1 lb. of fruit yields about 42 grs. of oil.

Used to render medicines more palatable, and prevent griping.

(Brit. 1864; not in others.)

Contained in Syrupus Sennæ.

Dose.—1 to 4 minims in pill or emulsion.

CREASOTUM.

$C_{28}H_{16}O_4$; eq. 216.

A product of the distillation of Wood Tar.

Solubility, sparingly in water; freely in Alcohol, Ether, in Glacial Acetic Acid. 1 in 1, but separates on the addition of water.

Creasote was discovered by Reichenbach, who found it in Wood Tar. It possesses the peculiar property of coagulating Albumen and preserving animal substances from decay. It is to the presence of this substance that the process of smoking hams owes its efficacy. Its name is derived from this circumstance.

Test.—Boils at 400° F. Sp. g. 1·071. It is not solidified by the cold produced by the mixture of Hydrochloric Acid and Sulphate of Soda. A slip of deal dipped into it, and afterwards into Hydrochloric Acid, and then allowed to dry in the air, acquires a greenish-blue colour. Dropped on white filtering-paper, and exposed to a heat of 212° F., it leaves no translucent stain. It coagulates Albumen. It turns the plane of a ray of polarized light to the right, whereas Carbolic Acid does not affect Polarization.

(In all the Pharmacopœias.)

Medicinal Properties.

Astringent, narcotic, styptic, antiseptic, and escharotic. Given internally for chronic gonorrhœa and gleet, for arresting nausea in hysteria and pregnancy, and for obstinate sea-sickness. It has been given with advantage in malignant cholera and cholera infantum, and bleeding from the intestines. It allays thirst and craving for food in diabetes. One drachm in 15 or 20 oz. of water for a gargle in obstinate salivation. 1 drop to 1 oz. of water is injected into the bladder to obviate the putrid odour of the urine. Externally used, in the proportion of 1 drop to 1 drm. for a lotion, to eruptions of a scaly character, to burns and chilblains, to erysipelas of the face, with swelling and pain; toothache, when depending on caries, is relieved by its application.

Dose.—1 to 3 minims, diluted with weak mucilage, ½ oz. to each minim; or in a pill with crumb of bread.

When prescribed in pills with Oxide of Silver, the mass will take fire unless the oxide be first mixed with Liquorice or other powder.

Preparation.

MISTURA.

Creasote, 16 minims; Glacial Acetic Acid, 16 minims; Spirit of Juniper, ½ drm.; Syrup, 1 oz.; Distilled Water, 15 oz.: mix. =(1 in 484).

A good mode of administering Creasote, its unpleasant taste being concealed by the Juniper.

It dissolves in the Water without the aid of the Acid.

Mucilage will render Creasote emulsive with water.

(Same as Brit. 1864, and Edin. but stronger of Juniper; U. S. Aqua Creasoti 1 in 128 water; not in others.)

Dose.—1 to 2 oz.

UNGUENTUM.

Creasote, 1; Simple Ointment, 8: mix. =(1 in 9).

(Same as Brit. 1864; Dub. 1 in 8; Edin. 1 in 25; Lond. U. S. and Belg. 1 in 17; not in others.)

Employed in mild cases of ringworm.

VAPOR.—INHALATION.

Creasote, 12 minims; boiling Water, 8 oz.: mix the Creasote and water in an apparatus so arranged that air may be made to pass through the solution for inhalation.

Not Officinal.

Liquor Carbonis Detergens.—An alcoholic solution of Coal Tar as obtained rom the gas-works. It is almost black, smells strongly of Naphthaline, and is of light

specific gravity. Prescribed by Mr. Startin to be used externally in skin diseases in the following manner:—Liq. Carbonis Detergentis, ½ oz.; Ac. Nitric. Dil. 1 drm.; Mist. Camphoræ ad 8 oz.; to be sponged over the part affected when irritable, and afterwards to be dried off with soft linen.

CRETA.

Used for producing Carbonic Acid Gas.

CRETA PRÆPARATA.

PREPARED CHALK.

Carbonate of Lime, CaO,CO_2, nearly pure; eq. 50.

Solubility: almost entirely in dilute Hydrochloric Acid, (provided it contains no Sulphate of Lime or Silicia), giving off small bubbles of Carbonic Acid. Insoluble in water.

Test.—The salt formed by dissolving the Chalk in Hydrochloric Acid, if rendered neutral by evaporation to dryness and redissolved in water, gives only a very scanty precipitate on the addition of saccharated Solution of Lime—indicating absence of Phosphate.

(Brit. 1864, Lond. Edin. Dub. and U. S.; Austr. Creta Depurata; Belg. Carbonas Calcis Depuratus; Fr. Poudre de Craie; U. S. Creta; not in others.)

INCOMPATIBLES.—All Acids and Sulphates.

Medicinal Properties.

It is an astringent and antacid. Combined with other astringents and aromatics, it is used in diarrhœa accompanied with acidity. One of the best antidotes for Oxalic Acid. Has been recommended in rachitis and in scrofulous affections. Used externally to burns and ulcers.

Prescribed in powder or suspended in mucilage.

Dose.—10 to 100 grs.

Contained in Hydrargyrum cum Creta.

Preparations.

MISTURA CRETÆ.

Prepared Chalk, 1; Gum Arabic, in Powder, 1; Syrup, 2; Cinnamon Water, 30: mix by trituration. =(1 in 34).

(Same as Brit. 1864 and Fr.; nearly same as Dub.; Lond. and Belg. 1 in 40; Edin. 1 in 36, with spirit; U. S. 1 in 16; not in others.)

Dose.—1 to 2 oz., with astringent tinctures and opium.

Care should be taken to use the *Prepared* Chalk, as directed; the Precipitated Chalk has a crystalline character and is said to occasion irritation of the bowels.

PULVIS CRETÆ AROMATICUS.

Chalk, 11; Cinnamon, 4; Nutmeg, 3; Saffron, 3; Cloves, 1½; Cardamoms Seed, 1; Refined Sugar, 25. =(1 Chalk in 4).

(Brit. 1864 and Fr.; similar to Lond. Confectio Aromatica.)

Dose.—30 to 60 grs.

PULVIS CRETÆ AROMATICUS CUM OPIO.

Aromatic Powder of Chalk, 39; Opium, in powder, 1: mix thoroughly and pass through a sieve. =(1 Opium in 40).

(Brit. 1864 and Fr.)

Dose.—10 to 40 grs.

Not Officinal.

CHOLERA MIXTURE.—Aromatic Powder, 3 drms.; Sp. Sal Volatile, 3 drms.; Tincture of Catechu, 10 drms; Compound Tincture of Cardamoms, 6 drms.; Tincture of Opium, 1 drm.; Chalk Mixture to make 20 oz.

This mixture was proposed by the Board of Health during the prevalence of cholera, and is useful in all cases of Diarrhœa.

Dose.—1 oz. for an adult, ½ oz. for a child twelve years old, ¼ oz. for seven years old, after each liquid motion.

CROCUS.

SAFFRON.

The stigma and part of the style of the *Crocus sativus* dried; imported from Spain, France, and Naples.

Test.—When rubbed on the moistened finger it tinges it an intense orange-yellow. Pressed between the folds of filtering-paper it leaves no oily stain. Concentrated Sulphuric Acid instantly changes its colour to indigo-blue.

(In all the Pharmacopœias; Fr. Safran.)

Medicinal Properties.

A slightly exhilarating stimulant. Useful for giving colour and flavour to officinal preparations.

Contained in Decoct. Aloes Comp.; Pil. Aloes et Myrrhæ; Tinct. Rhei; Tinct. Cinch. Comp.; Pulvis Aromaticus, *see* CINNAMOMUM.

Preparation.

TINCTURA.

Saffron, 1; Proof Spirit, 20: macerate forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator, let it drain, and then pour on the remaining spirit; when it ceases to drop, wash the marc with spirit to make up 20. =(1 in 20).

(Same as Brit. 1864, and Edin.; Dub. 1 in 10; (Austr. 1 in 10; Belg. 1 in 5; Fr. 1 and 10, by weight;) not in others.)

Dose.—½ to 2 drms.

CROTONIS OLEUM.

CROTON OIL.

The oil expressed from the seeds of the *Croton Tiglium*, a native of Hindostan, Ceylon, and the Moluccas. It may be separated by decoction in Water, or by the action of Ether, which dissolves the oil and leaves it behind on evaporation. 100 parts of seed yield about 50 or 60 of oil.

Solubility: wholly in Ether, Oil of Turpentine, and Olive Oil.

Test.—Agitated with its own volume in Alcohol and gently heated it forms a clear solution, from which about three-fourths of the oil separate on cooling.

(In all the Pharmacopœias ; U. S. Ol. Tiglii.)

Medicinal Properties.

A powerful hydragogue purgative, acting with great rapidity. In cases of obstinate constipation, and in apoplexy. Applied externally in rheumatism, gout, neuralgia, glandular and other indolent swellings, and in laryngeal and pulmonary diseases in the form of liniment.

Dose.— $\frac{1}{3}$ to 1 minim.

In pill with Crumb of Bread, or in combination with Comp. Ext. of Colocynth.

Preparation.

LINIMENTUM CROTONIS.

Croton Oil, 1 ; Oil of Cajeput, $3\frac{1}{2}$; Rectified Spirit, $3\frac{1}{2}$: mix. =(1 in 8).

Br. Ph. 1864, with Olive Oil, and was scarcely strong enough to produce pustular eruptions.

(Dub. Croton Oil, 1, Turpentine, 7. Not in others.)

ANTIDOTES.—In case of an over-dose which acts as a violent purgative, an emetic of 10 grains of Sulphate of Copper should be at once administered, followed by mucilaginous fluids and Opium to check the diarrhœa.

CUBEBA.

CUBEBS.

The unripe fruit of the *Cubeba officinalis*, dried, imported from Java.

Medicinal Properties.

Gently stimulant, with special direction to the urinary organs. Given in gonorrhœa, most safely when the inflammation is confined to the mucous membrane of the urethra.

(In all the Pharmacopœias ; Fr. Poivre à Queue ; Pr. Fructus Cubebæ.)

Dose.—For gonorrhœa 1 to 2 drms. of the powder, in moistened wafer-paper, three or four times a day. In other cases the dose may be reduced to 10 grs.

Preparation.

OLEUM.

The Oil, distilled in Britain.

(Brit. 1864, Belg. and U. S. ; not in others.)

Dose.—5 to 20 minims, suspended in Water by means of Mucilage and Sugar.

TINCTURA.

Cubebs, in powder, 1 ; Proof Spirit, 8 : macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain ; pour on the remaining spirit, and when it ceases to drop, wash the marc with spirit to make up 8. =(1 in 8).

Dose.—1 to 2 drms.

(Same as U. S. ; Dub. 1 in 4 ; not in others.)

CUPRUM.

COPPER.

Cu, eq. 31·75; or **Cu**, 63·5.

Copper, or Venus of the alchemists, has been employed from the earliest ages, and previously to the discovery of malleable iron was the principal ingredient in the formation of domestic utensils and instruments of war. It takes its name from the island of Cyprus, where it was wrought by the Greeks. It is found both native and in combination with Oxygen, Chlorine, and Sulphur; of these, the Sulphate only is officinal. The purest Copper is that which is deposited by electricity.

Copper wire No. 25 is used for preparing Spiritus Ætheris Nitrosi.

CUPRI SULPHAS.

SULPHATE OF COPPER.

CuO,SO_3+5HO, eq. 124·75; or $CuSO_4,5H_2O$, eq. 259·5.

A filtered solution of the Sulphate of Copper of commerce, re-crystallized.

In oblique prismatic crystals of a clear blue colour. Sp. g. 2·104.

Solubility: in Water, 1 in 3. Whatever Ammonia throws down from this solution is re-dissolved by an excess of the precipitant.

(In all the Pharmacopœias.)

Test.—An aqueous solution of the salt to which twice its volume of Solution of Chlorine has been added, when treated with an excess of Solution of Ammonia, gives a sapphire-blue solution, leaving nothing undissolved—indicating absence of Iron and other impurities.

INCOMPATIBLES.—Alkalies and their Carbonates, Lime Water, Mineral Salts, except the Sulphates and most astringent Vegetables.

ANTIDOTE.—In case of poisoning by Sulphate of Copper, Albumen or White of Egg is the best antidote.

Medicinal Properties.

Astringent, tonic, and emetic. Given in epilepsy and chorea. Recommended also in croup and in chronic diarrhœa. The most reliable emetic in cases of narcotic poisoning. Externally, as a stimulant to ulcers, as an escharotic for warts, etc., and a styptic for bleeding surfaces. As an injection, to diminish excessive secretion from mucous membranes, especially in cases of prolapsus ani, where it affords permanent relief, the solution should be made 5 grs. to the oz. It is also used in various affections of the eyes when astringent applications are required.

Dose.—$\frac{1}{2}$ gr. gradually increased to 2 grs. three times a day, in pill, as a tonic for epilepsy; 10 grs. in 2 oz. of water as a prompt emetic in cases of narcotic poisoning. Externally, for lotions, in proportions from 2 to 4 grs. to 1 oz.; also 8 grs. to 1 oz. for prurigo genitalium. For injections, 1 to 4 grs. in an ounce of water.

Not Officinal.

LAPIS DIVINUS.—Sulphate of Copper, Nitrate of Potash, and Alum, of each equal parts, in powder, fused in a glazed earthen crucible, powdered Camphor, to the extent of $\frac{1}{60}$th part of the whole, being added near the end of the process. When cold, break in pieces and keep in a closely-stoppered bottle. An eye-wash may be made of 2 grains to an ounce of distilled water.

(Fr. Pierre Divine.)

CUSPARIÆ CORTEX.

CUSPARIA BARK; ANGUSTURA BARK.

The bark of the *Galipea Cusparia*, from tropical South America.

Test.—The inner surface touched with Nitric Acid does not become blood-red.

This test is to guard against the Strychnos Bark being mistaken for the Cusparia; the former contains Brucia, which becomes red by contact with Nitric Acid.

(Same as Brit. 1864, Lond. and Edin.; U. S. Belg. Fr. Angustura; not in others.)

Medicinal Properties.

A stimulant tonic. Used in malignant bilious fever, intermittent fever, dysentery, and in convalescence from acute diseases. Probably more effective in warm than temperate climates. Aromatics are generally combined with it, to prevent nausea.

Dose.—Of the powder, 10 to 40 grs.

Preparation.

INFUSUM.

Cusparia, in coarse powder, 1; Distilled Water at 120°, 20: infuse two hours and strain. =(1 in 20).

(Same as Brit. 1864; Lond. and Edin. 1 in 27; U. S. Inf. Angusturæ, 1 in 34; not in others.)

Dose.—1 to 2 oz.

INCOMPATIBLES.—Mineral Acids, Perchloride of Iron, and other Metallic Salts.

CUSSO.

KOUSSO.

The flowers and tops of the *Brayera anthelmintica*, from Abyssinia.

Medicinal Properties.

Anthelmintic. Especially for tænia.

(Brit. 1864, Belg. U. S.; not in others.)

Dose.—¼ to ½ oz.

Preparation.

INFUSUM.

Kousso, in coarse powder, ¼ oz.; boiling Distilled Water, 4 oz.: infuse fifteen minutes, without straining, for one dose.

(Brit. 1864; not in other Pharmacopœias.)

Not Officinal.

CYDONIUM.

QUINCE SEED.

The seeds of the *Cydonia vulgaris*.

Their coriaceous envelope abounds in mucilage.

Medicinal Properties.—Demulcent. The decoction used externally for cracks in the skin. A nice neutral adjunct to eye-lotions in cases of irritation and inflammation.

Decoction (Lond.).—Quince Seed, 1; Distilled Water, 80: boil over a slow fire for ten minutes, and strain.

DECOCTA.

DECOCTIONS.

The Decoctions which were in former Pharmacopœias and omitted in the British, are:—Decoctum Chimaphilæ, Lond. and Dub.; Cinchonæ Pallidæ, Lond. Edin. and Dub.; Cinchonæ Rubræ, Edin. and Dub.; Cinchonæ Cinereæ, Edin.; Cydonii, Lond.; Dulcamaræ, Lond. Edin. and Dub.; Gallæ, Lond.; Granati, Lond.; Guaiaci, Edin.; Hordei Compositum, Lond. and Edin.; Lini Compositum, Dub.; Mezerei, Edin.; Myrrhæ, Dub.; Pyrolæ (vel Chimaphilæ), Lond. and Dub.; Scoparii Compositum, Lond. and Edin.; Senegæ, Lond.; Tormentillæ, Lond.; Uvæ Ursi, Lond. and Dub.

No new ones are introduced.

The following are the Decoctions of the British Pharmacopœia, the formulæ of which will be found under the names of the substances from which they are prepared:—

		Proportion of active ingredients to the whole.	Dose.
Page 22.	DECOCTUM ALOES COMPOSITUM. .	1 in 120.	½ to 1½ oz.
77.	DECOCTUM CETRARIÆ	1 in 20.	1 to 2
82.	DECOCTUM CINCHONÆ FLAVÆ . .	1 in 16.	1 to 2
127.	DECOCTUM GRANATI RADICIS. . .	1 in 10.	1 to 2
128.	DECOCTUM HÆMATOXYLI	1 in 20.	1 to 2
129.	DECOCTUM HORDEI	1 in 15.	
180.	DECOCTUM PAPAVERIS	1 in 10.	
181.	DECOCTUM PAREIRÆ	1 in 14.	1 to 2
205.	DECOCTUM QUERCUS	1 in 16.	
218.	DECOCTUM SARSÆ	1 in 8.	2 to 10
218.	DECOCTUM SARSÆ COMPOSITUM .	1 in 8.	2 to 10
222.	DECOCTUM SCOPARII	1 in 20.	2 to 4
246.	DECOCTUM TARAXACI	1 in 20.	2 to 4
253.	DECOCTUM ULMI	1 in 8.	2 to 4

Decoctions not officinal are enumerated in the Index.

DIGITALINUM.

DIGITALIN.

The active principle obtained from Digitalis.

An uncrystallizable light-brown powdery resinoid substance.

Solubility: readily in Spirit; dissolves in Acids, but does not form with them neutral compounds; almost insoluble in Water and in pure Ether.

Test.—Leaves no residue when burnt with free access of air.

(Brit. 1864 and Fr.; in no other Pharmacopœia.)

Dose.—$\frac{1}{60}$ to $\frac{1}{30}$ of a gr.

This powerful poison might well have been omitted from the British Pharmacopœia, together with its dose (by authority), which in practical dispensing is as difficult to weigh, as it is to test the purity of the drug itself. It will be very rarely, if ever, prescribed by careful practitioners.

DIGITALIS FOLIA.

DIGITALIS LEAF.

The dried leaf of the *Digitalis purpurea* (*Foxglove*), gathered from wild indigenous plants when about two-thirds of the flowers are expanded.

Medicinal Properties.

Sedative and diuretic, when disturbance arises from over-action of the heart. It is cumulative in action, and requires caution.

Dose.—$\frac{1}{2}$ to 2 grs. of the powdered leaf.

INCOMPATIBLE.—Perchloride of Iron.

Preparations.

DIGITALINUM.—*See* DIGITALINUM.

INFUSUM.

Digitalis, dried, 30 grs.; boiling Distilled Water, 10 oz.: infuse one hour and strain. =(1 in 160).

(Same strength as Brit. 1864 and Lond.; half that of Edin. and Dub.; Edin. and Lond. with Spirit of Cinnamon; U. S. 1 in 70; not in others.)

Dose.—$\frac{1}{4}$ to $\frac{1}{2}$ oz.

TINCTURA.

Digitalis, dried and bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit; when it ceases to drop, press and wash the marc with spirit to make up 8. =(1 in 8).

(Same as Brit. 1864 and Dub.; Lond. and Edin 1 in 9; U. S. 1 in $7\frac{5}{8}$; (Austr. Belg. Fr. 1 in 5, by weight;) not in Pr.)

Dose.—10 to 30 minims.

INCOMPATIBLES.—Sulphate and Tinct. Perchloride of Iron, preparations of Cinchona, Acetate of Lead.

ANTIDOTE.—In case of an overdose, a recumbent posture is most important; and after the stomach has been emptied, stimulants externally and internally should be employed.

Not Officinal.

SUCCUS DIGITALIS.—The Expressed Juice, 3; Rectified Spirit, 1.

This preparation may be given for a longer period than the tincture without causing nausea.

Dose.—5 to 10 minims.

DULCAMARA.

DULCAMARA.

The dried young branches of the *Solanum Dulcamara* (Bittersweet), from indigenous plants which have shed their leaves.

Medicinal Properties.

Narcotic. Increases the secretions, particularly of the kidneys and skin. It has a peculiar action on the skin, and has been observed to impart a dark purple colour to the face and hands. Used in cutaneous eruptions, chiefly of a scaly character, as lepra, psoriasis, and pityriasis. Also in chronic rheumatism and catarrh. A decoction is applied also externally in skin diseases at the same time it is used internally.

(Brit. 1864, Lond. Edin. and Dub.; Belg. U. S. Fr. Douce-amère; not in others.)

Preparation.

INFUSUM.

Dulcamara, bruised, 1; boiling Distilled Water, 10: infuse one hour, and strain. =(1 in 10).

(Brit. 1864; a decoction was ordered in Lond. Edin. Dub. U. S. and Belg.; not in others.)

Dose.—1 to 2 oz.

ECBALII FRUCTUS.

SQUIRTING CUCUMBER FRUIT.

The fruit very nearly ripe of the Squirting Cucumber, *Ecbalium officinarum.*

(Fr. Ecbalium Agreste, Concombre Sauvage.)

ELATERIUM.

ELATERIUM.

A sediment from the expressed juice of the fruit of the *Ecbalium officinarum.*

The fruit is cut lengthwise, the juice lightly pressed out, strained through a hair sieve, then allowed to deposit; the clear liquor being poured off, the sediment thrown on a linen strainer to drain, and lastly dried on a porous brick with a gentle heat.

Test.—Does not effervesce with acids; yields half its weight to boiling Rectified Spirit. This solution concentrated and added to warm Solution of Potash yields, on cooling, not less than 20 per cent. of Elaterine in colourless crystals. It is not injured by light.

(In all the Pharmacopœias except Austr. Fr. and Pr.)

Medicinal Properties.

A powerful hydragogue cathartic. Especially used in dropsical affections connected with cardiac or renal disease. Its administration in a debilitated state of the system requires caution.

Dose.—To prevent its causing nausea it may be combined with Henbane, and is best given in doses of $\frac{1}{16}$ to $\frac{1}{2}$ gr. till it operates. Mr. Vance gave it with Gamboge in dropsy.

ANTIDOTES.—In case of poisoning with Elaterium, Emollient and Emulsent drinks and enemata, to be followed by small but repeated doses of Opium and the use of the warm bath.

ELEMI.

ELEMI.

A concrete resinous exudation, chiefly imported from Manilla.

Should have a fragrant, fennel-like odour, and is usually soft and unctuous to the touch, almost entirely soluble in Rectified Spirit.

Medicinal Properties.

Analogous to those of Turpentine. For external use only.

(In all the Pharmacopœias, except U. S.)

Preparation.

UNGUENTUM.

Elemi, 1; Simple Ointment, 4: melt and strain. =(1 in 5).

(Same as Brit. 1864 and Dub.; Lond. Austr. Belg. and Pr. 1 Elemi and 1 Turpentine in 4; not in others.)

To keep open issues and setons.

EMPLASTRA.

PLASTERS.

The following Emplastra of former Pharmacopœias are omitted from the British:—Emplastrum Ammoniaci, Lond. Edin. Dub.; Assafœtidæ, Edin.; Cantharidis Comp., Edin.; Cumini, Lond.; Potassii Iodidi, Lond.; Simplex, Edin.

The Emplastra of the British Pharmacopœia are as follows, the formulæ for which will be found under names of the drugs from which they are prepared:—

		Proportion of active ingredients in the mass.
Page 25, 117.	EMPLASTRUM AMMONIACI CUM HYDRARGYRO (Mercury)	1 in 5.
48.	EMPLASTRUM BELLADONNÆ . (Extract dissolved by Alcohol)	1 in 2.
65.	EMPLASTRUM CALEFACIENS . . . . (Cantharides)	1 in 25.
65.	EMPLASTRUM CANTHARIDIS . . . . (Cantharides)	1 in 3.
65.	EMPLASTRUM CERATI SAPONIS . . . . . (Soap)	1 in 5½.
115.	EMPLASTRUM FERRI . . . . . (Peroxide of Iron)	1 in 11.
112.	EMPLASTRUM GALBANI . . . . . (Galbanum)	1 in 11.
131.	EMPLASTRUM HYDRARGYRI . . . . . (Mercury)	1 in 3⅔.
176.	EMPLASTRUM OPII . . . . . (Opium)	1 in 10.
185.	EMPLASTRUM PICIS . . . . . (Pitch)	1 in 2.
189.	EMPLASTRUM PLUMBI.	
189.	EMPLASTRUM PLUMBI IODIDI	1 in 8.
207.	EMPLASTRUM RESINÆ . . . . . (Resin)	about 1 in 10.
217.	EMPLASTRUM SAPONIS . . . . . (Soap)	1 in 7.

Plasters which are not officinal are enumerated in the Index.

ENEMATA.

ENEMAS.

Enema Colocynthidis is the only Enema of former Pharmacopœias that has been omitted. The following are the Enemas of the British Pharmacopœia, the formulæ for which will be found under the names of the drugs from which they are prepared:—

		In each Enema.
Page 21, 22.	ENEMA ALOES	40 grs. Aloes.
43.	ENEMA ASSAFŒTIDÆ	30 grs. Assafœtidæ.
160.	ENEMA MAGNESIÆ SULPHATIS	(Catharticum) 1 oz. Sulphate.
176.	ENEMA OPII	½ drm. Tincture.
245.	ENEMA TABACI	20 grs. Leaf.
247.	ENEMA TEREBINTHINÆ	1 oz. Oil.

ERGOTA.

ERGOT.

The diseased seeds of the *Secale cereale.**

Test.—Yields its virtues to Water and Alcohol. The aqueous infusion has an acid reaction. It is precipitated by Acetate and Subacetate of Lead, Nitrate of Silver, and Tincture of Galls. With Iodine, does not show evidence of Starch.

In percolating the powder with Ether, more than one-third of its original weight of Oil is extracted.

Medicinal Properties.

Has a special tendency to action upon the uterus in parturition when that organ has not sufficient muscular power, the os, however, being sufficiently dilated. Employed in uterine hæmorrhage and floodings. It is of service also in pulmonary hæmorrhage. In amenorrhœa, if Iron is given for three weeks and the fourth week the Liquid Extract of Ergot be administered in 15 minim doses three times a day, it rarely fails to bring on catamenia in young persons.

(In all the Pharmacopœias; Austr. Belg. and Pr. Secale Cornutum; Fr. Seigle Ergoté.)

Dose.—20 to 30 grs., infused in boiling water, to cause uterine contraction; 5 to 10 grs. three times a day in spinal cases.

Preparations.

EXTRACTUM LIQUIDUM.

Ergot, in coarse powder, 16; Ether, 20; Distilled Water, 70; Rectified Spirit, 8. Shake the Ether in a bottle with half its bulk of the Water, and

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* Ergot is common among grasses, and if it occurs in the pastures where cattle feed, it is said to occasion dry gangrene, causing the cattle to lose their hoofs and horns.

after separation decant the Ether. Place the Ergot in a percolator, and free it from oil by passing the washed Ether through it. Remove the marc, and digest in the remainder of the water at 160° F. for twelve hours. Press out the liquor and evaporate it to 9, and, when cold, add the 8 of spirit. Allow it to stand for an hour to coagulate, filter, and make up the quantity to 16. =(1 in 1).

Note.—The Ether here ordered is not sufficient; it should be 40 instead of 20, thus, 20 oz. should be poured upon the Ergot first, and, when it ceases it to drop, 20 ounces more should be poured on it, and when that ceases to drop, the ergot should be taken out and dried (to get rid of all the Ether) before it is digested in the water.

16 oz. of the liquid Extract evaporated leaves 2¼ ounces of solid Extract.

(Same as Brit. 1864, and U. S.; Austr. and Belg. have a solid extract; not in others.)

Dose.—15 to 30 minims.

INFUSUM.

Ergot, in coarse powder, 1; boiling Distilled Water, 40: infuse half an hour and strain. =(1 in 40)

Should be made fresh on each occasion.

Dose.—1 to 2 oz.

(Same as Brit. 1864; Dub. 1 in 36; not in others.)

TINCTURA.

Ergot, bruised, 1; Proof Spirit, 4: macerate forty-eight hours with 3 of the spirit, agitating occasionally, pack in a percolator, let it drain, then pour on the remaining spirit; when it ceases to drop, wash the marc with spirit to make up 4. =(1 in 4).

(Same as Brit. 1864; Dub. 1 in 5; Lond. Ethereal; not in others.)

Dose.—15 to 60 minims.

ESSENTIA ANISI.

ESSENCE OF ANISE.

Oil of Anise, 1; Rectified Spirit, 4: mix. =(1 in 5).

Dose.—10 to 20 minims.

(Dub. 1 in 10; not in others.)

ESSENTIA MENTHÆ PIPERITÆ.

Oil of Peppermint, 1; Rectified Spirit, 4: mix. =(1 in 5).

Dose.—10 to 20 minims.

(Dub. 1 in 10; U. S. 1 in 16; not in others.)

EXTRACTA.

EXTRACTS.

The following Extracts, which were in former Pharmacopœias, are omitted

in the British :—Cinchonæ Cordifoliæ, Lond. and Edin.; Cinchonæ Pallidæ, Lond. and Edin.; Cinchonæ Rubræ, Lond. and Edin.; Colocynthidis, Lond. and Edin.; Digitalis, Edin.; Styracis, Edin.; Uvæ Ursi, Lond.

The following new Extracts are contained in the British Pharmacopœia :—Belæ Liquidum, Calumbæ, Cinchonæ Flavæ Liquidum (formerly Infusum Cinchonæ Spissatum), Ergotæ Liquidum, Filicis Liquidum (formerly Oleum Filicis-Maris), Mezerii Etherium, Opii Liquidum, Pareiræ Liquidum, Physostigmatis, Quassiæ.

The following is a complete list of the Extracts of the British Pharmacopœia, the formulæ for which will be found under the names of the drugs from which they are prepared :—

DOSE.	PAGE	EXTRACTUM.	MENSTRUUM.
1 to 2 grs.	16.	ACONITI (juice of fresh herb).	
1 to 3 grs.	21.	ALOES BARBADENSIS.	Boiling water.
1½ to 3 grs.	22.	ALOES SOCOTRINÆ.	Boiling water.
2 to 10 grs.	33.	ANTHEMIDIS (dried flowers).	Boiling water.
1 to 2 drms.	48.	BELÆ LIQUIDUM.	Cold water, 1 in 1.
¼ to 1 gr.	48.	BELLADONNÆ (juice of fresh herb).	
2 to 10 grs.	60.	CALUMBÆ (dried root).	Cold water.
¼ to 1 gr.	64.	CANNABIS INDICÆ (dried herb).	Cold rectified spirit.
10 to 30 mins.	82.	CINCHONÆ FLAVÆ LIQUIDUM.	Cold water, 4 in 1.
½ to 2 grs.	85.	COLCHICI (juice of fresh corms).	
½ to 2 grs.	86.	COLCHICI ACETICUM (fresh corms).	With Acetic Acid.
3 to 10 grs.	88.	COLOCYNTHIDIS COMPOSITUM.	
2 to 6 grs.	89.	CONII (juice of fresh herb).	
10 to 30 mins.	102.	ERGOTÆ LIQUIDUM (dried Ergot).	Ether and cold water, 1 in 1.
15 to 30 mins.	121.	FILICIS LIQUIDUM (dried rhizome).	Ether.
5 to 10 grs.	124.	GENTIANÆ (dried root).	Boiling water.
	126.	GLYCYRRHIZÆ (dried root).	Cold water.
10 to 30 grs.	128.	HÆMATOXYLI (chips).	Boiling water.
5 to 10 grs.	128.	HYOSCYAMI (juice of fresh herb).	
5 to 15 grs.	144.	JALAPÆ (dried root).	Spirit and cold water.
5 to 20 grs.	147.	KRAMERIÆ (dried root).	Cold water.
5 to 15 grs.	148.	LACTUCÆ (juice of fresh flowering herb).	
5 to 15 grs.	156.	LUPULI (dried catkins).	Spirit and hot water.
	164.	MEZERII ETHERIUM (dried Bark).	Ether.
½ to 2 grs.	172.	NUCIS VOMICÆ.	Boiling Rectified Spirit.
½ to 2 grs.	176.	OPII (Aquosum).	Cold water.
10 to 40 mins.	177.	OPII LIQUIDUM. (Stronger than Tinct. Opii).	Cold water and spirit.
2 to 5 grs.	180.	PAPAVERIS (dried capsules).	Boiling water and spirit.
10 to 20 grs.	181.	PAREIRA (dried root).	Boiling water.
½ to 2 drms.	181.	PAREIRÆ LIQUIDUM (dried root).	Boiling water and spirit.
$\frac{1}{16}$ to ¼ gr.	183.	PHYSOSTIGMATIS (Calabar bean).	Cold Rectified Spirit.
3 to 5 grs.	204.	QUASSIÆ (chips).	Cold water.

DOSE.	PAGE	EXTRACTUM.	MENSTRUUM.
5 to 10 grs.	208.	RHEI (dried root).	Cold weak spirit.
2 to 4 drms.	219.	SARSÆ LIQUIDUM (root cut transversely).	Cold water and spirit.
¼ to ½ gr.	238.	STRAMONII (dried seeds).	Ether and cold weak spirit.
5 to 30 grs.	246.	TARAXACI (juice of fresh root).	

Extracts which are not officinal are enumerated in the Index.

Extracts are to be found in Pharmacopœias of very early date, and they are highly satisfactory preparations, as they represent very completely the properties of the plant from which they are made. They are moreover, as a general rule, well adapted for pills,—a convenient form and least objectionable to the patient.

Although the extracts from the fresh medicinal plants have been so long in use, many erroneous notions have prevailed as to the best mode of making them. All previous Pharmacopœias order the *leaves* only to be employed, under the idea that the properties of the plant were most highly developed in those organs. These leaves, again, were directed to be gathered for medicinal use before the flowering of the plant. The Author, who has been occupied in this branch of pharmacy for thirty years, is entirely opposed to this plan, both as to the parts employed and the time of gathering. In a paper on "Preserved Juices," read at the Pharmaceutical Society in 1841,* he stated his opinion that the plant was in the highest state of perfection when fully one-third of the flowers were blown. The main object of the growth and inflorescence of a plant is the production of seed, and the whole vital power is concentrated about the period of inflorescence for this object; at this time, therefore, is the greatest perfection to be expected. That the production of the seed requires the whole vital energy of which the plant is capable, may be seen in the fact that many plants (annuals) are unable to survive it.

In a more recent paper,† he has shown that the active power resides by no means exclusively in the leaves; on the contrary, an extract prepared from the tender stalks is the more powerful. The plant selected for experiment was Belladonna, because in this case extremely accurate results could be obtained by determining the relative action of the two extracts on the eye. In consequence of these experiments, the British Pharmacopœia has ordered the tender stalks as well as the leaves for making extracts from fresh plants.

The perfection of extracts made from fresh vegetables depends much on the attention given to them during their preparation and to the temperature at which they are made. The lower the temperature during evaporation, the better the extract, if the time be not protracted so long as to cause some chemical change. It should be borne in mind that evaporation goes on only half as rapidly at 150° as it does at 180°, and only half at 180° as it does at 212°. Constant agitation materially influences the rate of evaporation. When the atmosphere is very dry, extracts may be made without artificial heat.

Extracts should be kept in a cool, dry place, first because a summer tem-

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* 'Pharmaceutical Journal,' vol. i. 1841. † Pharm. Journ., December, 1861.

perature frequently causes them to ferment, even though they may have been made with great care, and secondly, because in a damp atmosphere they are apt to become mouldy.

FARINA TRITICI.

WHEATEN FLOUR.

The grain of Wheat, *Triticum vulgare*, ground and sifted.

Used only for Cataplasma Fermenti.

FEL BOVINUM PURIFICATUM.

PURIFIED OX BILE.

Fresh Gall, 1; Rectified Spirit, 2: agitate, and set aside for twelve hours, then decant, and evaporate to a pill consistence.

Solubility: soluble in Water and in Spirit. Insoluble in Ether.

Test.—Its watery solution gives no precipitate on the addition of Rectified Spirit.

(Brit. 1864; Austr. Belg. Fr.; Pr. Fel Tauri Depuratum Siccum; not in others.)

Medicinal Properties.

Tonic and laxative. Used where there is a deficiency of bile.

It is not desirable that it should come in contact with the stomach, hence it is put into capsules or in pills coated with Tolu dissolved in Ether; the latter usually preferred.

Dose.—3 to 6 grs. in pill or dissolved in milk.

Formerly the bile was evaporated without purification, and then the dose was much larger.

FERMENTUM.

See CEREVISLÆ FERMENTUM, Page 75.

FERRUM.

IRON.

Fe, eq. 28; or **Fe**, eq. 56.

The use of Iron in medicine is of great antiquity; it is said to have been the first mineral used internally, more than three thousand years ago.

Annealed Iron Wire is the purest we can get, and is ordered in the Pharmacopœia for making the various preparations. Iron Filings should by no means be trusted, as they are generally full of impurities.

Medicinal Properties.

Metallic Iron would exert no action in the living system, were it not for the acid which it generally meets with in the stomach. It is given in the state of fine division, as in Ferrum Redactum. The Peroxide was formerly

used in the shape of Ferrum Præcipitatum, but latterly the Saccharo-Carbonate of Iron, and the Citrate of Iron, have taken its place. The Phosphates are much used, and the Tincture of the Perchloride, formerly called Sesquichloride, is still a favourite and reliable preparation; and for children the old Vinum Ferri is much prescribed.

Of the preparations of Iron, some are astringent, and the astringent forms are pre-eminently tonic and peculiarly well fitted to improve the quality of the blood when impoverished from any cause. Hence they are useful in diseases characterized by debility, especially in anæmia, associated with or consequent upon inordinate discharges. The diseases in which they are usually employed are chronic anæmia, dyspepsia, when dependent on deficient energy of the digestive function, and neuralgia. They are contra-indicated in acute inflammatory diseases, producing, when injudiciously employed, headache, and other symptoms of an excited circulation.

The following are the preparations of Iron contained in the British Pharmacopœia:—

FERRI ACETATIS TINCTURA.

Solution of Persulphate of Iron, 5; Acetate of Potash, 4; Rectified Spirit, q. s.: dissolve the Acetate of Potash in 20 of water, and add 16 of Spirit to the solution of Iron; mix the two liquids, and shake well occasionally for an hour, then filter, and add to the filtered liquid sufficient Rectified Spirit to make up 40.

(Dub.; not in others.)

Dose.—5 to 30 minims.

Not Officinal.

Ferri Acetatis Æther. Tinct., Pr. Ph., is frequently prescribed. Dose: 10 to 20 minims.

FERRI ARSENIAS.

ARSENIATE OF IRON.

Arseniate of Iron, $3FeO,AsO_5$, eq. 223; or Fe_3As_2,O_8, eq. 446; partially oxidized.

A tasteless amorphous powder, of a green colour.

Solubility: dissolves readily in Hydrochloric Acid; insoluble in water.

Test.—The solution in Hydrochloric Acid when diluted gives no precipitate with Chloride of Barium—indicating absence of Sulphuric Acid. 20 grains dissolved in an excess of Hydrochloric Acid diluted with water, continues to give a blue precipitate with the Ferridcyanide of Potassium, until at least 170 grain-measures of the volumetric solution of Bichromate of Potash have been added: that is to say, it must contain sufficient Protoxide of Iron to reduce this quantity of Bichromate of Potash.

Medicinal Properties.

Administered internally in obstinate herpetic and scaly affections of the skin. Also used in lupus, elephantiasis, psoriasis, chronic eczema, and lichen. Externally in cancerous affections, diluted with four times its weight of Phosphate of Iron, as a caustic application to cancerous ulcers. From its liability

to be absorbed, its use requires great caution. An ointment may be made with twelve times its weight of simple cerate.

(Brit. 1864; in no other Pharmacopœia.)

Dose.—$\frac{1}{16}$ gr., gradually increased to $\frac{1}{2}$ gr. in pill, three times daily.

ANTIDOTES.—In case of a poisoning dose, 10 grs. Sulphate of Copper in 2 oz. water is the most prompt emetic.

FERRI CARBONAS SACCHARATA.

SACCHARATED CARBONATE OF IRON.

Carbonate of Iron, FeO,CO_2, eq. 58, or $FeCO_3$, eq. 116, mixed with Peroxide of Iron and Sugar, the Carbonate forming at least 57 per cent. of the mixture.

Sulphate of Iron, 2; Carbonate of Ammonia, $1\frac{1}{4}$; Boiling Distilled Water, 320; Refined Sugar, 1: dissolve the Sulphate of Iron and the Carbonate of Ammonia each separately in one-fourth of the water, and mix thoroughly the two solutions in a deep cylindrical and closed vessel; in twenty-four hours decant the supernatant liquid, and pour the remainder of the water on the sediment, stir well, and again pour off the liquor when clear. Collect the deposit on a calico filter, press, and rub in the sugar in a porcelain mortar. Dry it at a temperature not exceeding 212°.

The Sugar protects the Carbonate of Iron from oxidation.

Small coherent lumps of a grey-brown colour, with a sweet, very feeble, chalybeate taste.

Dissolves with effervescence in warm diluted Hydrochloric Acid.

(Brit. 1864; Lond. Edin. Dub.; Austr. Ferrum Carbonicum Saccharatum; not in others.)

Test.—Its solution in Hydrochloric Acid gives but a very slight precipitate with the Chloride of Barium—indicating a trace of Sulphate. 20 grains dissolved in excess of Hydrochloric Acid, and diluted with water, continue to give a blue precipitate with the Ferridcyanide of Potassium, until at least 330 grain-measures of the volumetric solution of Bichromate of Potash have been added—that is to say, it must contain sufficient Protoxide of Iron to reduce this quantity of Bichromate of Potash.

INCOMPATIBLES.—Acids and Acidulous Salts; all Vegetable Astringents.

Medicinal Properties.

An excellent chalybeate. Possesses the advantage of having nearly all the iron in it in the state of protoxide, and of being readily soluble in acids. Not astringent. Useful in anæmic amenorrhœa.

Dose.—5 to 20 grs.

Preparations.

MISTURA FERRI COMPOSITA.

Sulphate of Iron, 25 grs.; Carbonate of Potash, 30 grs.; Myrrh, 60 grs.; Sugar, 60 grs.; Spirit of Nutmegs, 4 drms.; Rose Water, $9\frac{1}{2}$ oz.

Reduce the Myrrh to powder, add the Carbonate of Potash and Sugar,

and triturate them with a small quantity of Rose Water so as to form a thin paste, then gradually add more Rose Water, and the Spirit of Nutmegs, continuing the trituration and further addition of Rose Water until about eight fluid ounces of milky liquid is formed, then add the Sulphate of Iron previously dissolved in the remainder of the Rose Water, and cork the bottle immediately.

The spirit of Nutmeg in this formula is four times the amount of Brit. 1864, because it now contains five times less of the Oil.

It becomes reddish-brown by keeping, if air is not excluded.

(Brit. 1864; similar to Lond. Edin. Dub. and U. S.; not in others.)

Dose.—1 to 2 oz. as a stimulating tonic.

PILULA FERRI CARBONATIS.

Saccharated Carbonate of Iron, 4; Confection of Roses, 1: mix. =(1 in $1\frac{1}{4}$).

(Same as Brit. 1864, and Edin., and resembles Pil. Ferri Comp. Lond. but without the myrrh; Belg. Pil. Carbonatis Ferrosi; Fr. Pilules de Protocarbonate de Fer; U. S. with honey and sugar; not in others.)

Dose.—5 to 20 grs., as a tonic for delicate females and children.

FERRI ET AMMONIÆ CITRAS.

CITRATE OF IRON AND AMMONIA.

In thin transparent scales of a deep red colour, slightly sweet and astringent in taste.

Solution of Persulphate of Iron, 8; Solution of Ammonia, $19\frac{1}{2}$; Citric Acid in crystals, 4; Distilled Water, a sufficiency: mix 14 of Solution of Ammonia with 40 of the water, and to this add gradually the Solution of Persulphate of Iron previously diluted with 40 of the water, stirring constantly and briskly, let the mixture stand for two hours, stirring it occasionally, then put it on a calico filter, and when the liquid has drained away, wash the precipitate with the water until that which passes through the filter ceases to give a precipitate with Chloride of Barium; dissolve the Citric Acid in 8 oz. of the water, and having applied the heat of a water bath, add the Oxide of Iron previously well drained, stir them together until the whole or nearly the whole of the Oxide has dissolved. Let the solution cool, then add $5\frac{1}{2}$ of Solution of Ammonia, filter through flannel, evaporate to the consistence of Syrup, and dry it in thin layers on flat porcelain or glass plates at a temperature not exceeding 100°, remove the dry salt in flakes and keep in a stoppered bottle.

Soluble in water, 10 in 5; almost insoluble in Rectified Spirit.

Test.—Its solution in water, when acidulated with Hydrochloric Acid, gives a copious blue precipitate with the Ferrocyanide of Potassium—indicating Peroxide; but none with the Ferridcyanide—indicating absence of Protoxide. When incinerated with exposure to air, it leaves not less than 27 per cent. of Peroxide of Iron, which is not alkaline to litmus.

INCOMPATIBLES.—Mineral Acids and Vegetable Astringents.

Medicinal Properties.

As a blood restorer it is a very effectual salt, and it possesses scarcely any astringency: it may often be given when the stomach will not bear the more astringent preparations of iron.

(Brit. 1864; Lond. Dub. Ferri Ammonio-Citras; Fr. Citrate de Fer Ammoniacal, and U. S.; not in others.)

Dose.—5 to 10 grs.

In prescribing the above Salt to be taken during effervescence care must be taken to put the Salt of Iron into the Citric Acid Solution, and not into the Bicarbonate of Potash Solution, because if it be put into the latter, Carbonic Acid will be given off and the bottle burst. Tincture of Orange is the best flavouring agent, but prescribers are in the habit of ordering this Salt in Tincture of Orange Peel alone, in which it will not dissolve, therefore the division into doses is impracticable. The addition of only a small quantity of water will make the solution perfect.

Preparation.

VINUM.

Citrate of Iron and Ammonia, 160 grs.; Orange Wine, 20 oz.: dissolve, and after three days filter. =(1 gr. in each drm.)

Dose.—1 to 4 drms.

A new preparation.

The French have a Sirop of this, with Cinnamon and Sugar, 1 gr. in 50 minims.

FERRI ET QUINIÆ CITRAS.

CITRATE OF IRON AND QUININE.

Citric Acid combined with Peroxide of Iron, Protoxide of Iron, and Quinia.

Thin scales of a greenish golden-yellow colour, somewhat deliquescent, entirely soluble in cold water.

Solution of Persulphate of Iron, $4\frac{1}{2}$; Sulphate of Quinine, 1; diluted Sulphuric Acid, $1\frac{1}{2}$; Citric Acid, 3; Solution of Ammonia and Distilled Water, of each a sufficiency: mix 8 of the Solution of Ammonia with 40 of the Water, and to this add the Solution of Persulphate of Iron, previously diluted with 40 of the Water, stirring them constantly and briskly. Let the mixture stand for two hours, stirring it occasionally, then put it on a calico filter, and when the liquid has drained away, wash the precipitate with distilled water until that which passes through the filter ceases to give a precipitate with Chloride of Barium.

Mix the Sulphate of Quinia with 8 of the water, add the Sulphuric Acid, and when the salt is dissolved, precipitate the Quinia with a slight excess of Solution of Ammonia. Collect the precipitate on a filter, and wash it with 30 of the water. Dissolve the Citric Acid in 5 of the water, and having applied the heat of a water-bath, add the Oxide of Iron, previously well drained; stir them together, and when the oxide has dissolved, add the precipitated Quinia, continuing the agitation until this also has dissolved. Let the solution cool, then add in small quantities at a time $1\frac{1}{2}$ of Solution of Ammonia, diluted with 2 of the water, stirring the solution briskly, and allowing the Quinia, which separates with each addition of Ammonia, to dissolve before

the next addition is made. Filter the solution, evaporate it to the consistence of a thin syrup, then dry it in thin layers on flat porcelain or glass plates, at the temperature of 100°, remove the dry salt in flakes, and keep it in a stoppered bottle.

Solubility in water, 2 in 1.

Test.—Taste bitter as well as chalybeate. When burned with exposure to air, it leaves a residue which yields nothing to water (Oxide of Iron). 50 grains dissolved in an ounce of water, and treated with a slight excess of Ammonia, gives a white precipitate, which, when collected on a filter and dried, weighs 8 grains (Quinia). The precipitate is entirely soluble in pure Ether—indicating absence of Quinidine and Cinchonine. When burned, leaves no residue, and when dissolved by the aid of an acid, forms a solution which, decolorized by a little purified animal charcoal, turns the plane of polarization strongly to the left; (Cinchonine turns it to the right).

INCOMPATIBLES.—Alkalies and their Carbonates, Tannic Acid, Vegetable Astringents.

Medicinal Properties.

Astringent and tonic, combining the properties of both Iron and Quinia.

(Brit. 1864; U. S.; not in others.)

6 grains contain 1 grain of Quinine.

Dose.—5 to 10 grs. as a tonic, three times a day, in solution or in pill.

FERRI IODIDUM.

IODIDE OF IRON.

FeI, eq. 155; or FeI_2, eq. 310; with about 18 per cent. of water of crystallization, and a little Oxide of Iron.

Crystalline, green with a tinge of brown, inodorous, deliquescent.

Fine Iron Wire, 1; Iodine, 2; Distilled Water, 10: introduce the Iron, Iodine, and 8 of the water into a flask, heat it for about ten minutes, then boil until the red colour is gone. Filter through paper into a polished iron dish, washing with the rest of the water, and boil until a drop of the solution taken out with an iron wire solidifies on cooling. Pour on porcelain, when cool break into fragments, and keep in a stoppered bottle.

Solubility in water, 1 in 1.

Test.—It dissolves almost entirely in water, leaving but a very small quantity of red sediment.

INCOMPATIBLES.—Acids, Acidulous Salts, Alkalies and their Carbonates, Lime Water, Vegetable Astringents.

Medicinal Properties.

It combines the properties both of Iodine and Iron, and is a most valuable tonic in the treatment of scrofulous diseases in cachectic subjects requiring Iron. It was first prepared for medicinal purposes by the Author, who devised a mode of keeping the solution in water perfectly neutral at all times, by

merely putting into it a coil of soft iron wire, reaching from the surface to the bottom. Dr. A. T. Thomson had the merit of first prescribing it.

N.B.—It consists of 1 Iron, $4\frac{1}{2}$ Iodine, and $1\frac{1}{4}$ Water.

(Brit. 1864, Edin. Dub. Austr.; Fr. Iodure de Fer, and Pr. Ferrum Iodatum Saccharatum, 6 containing 1 of Iodine; Belg. Ferrum Ioduretum; not in others.)

Dose.—1 to 5 grs. in solution; the pill is rather a questionable mode of administering it.

Preparations.

PILULA.

Fine Iron Wire, 40 grs.; Iodine, 80 grs.; Refined Sugar in powder, 70 grs.; Liquorice Root in powder, 140 grs.; Distilled Water, 50 minims: agitate the Iron with the Iodine and the Water in a strong stoppered ounce phial, until the froth becomes white. Pour the fluid upon the Sugar in a mortar, triturate briskly, and gradually add the Liquorice.

3 grains contain 1 grain of the Iodide.

(Same as Brit. 1864; Fr. with Honey, Pilules de Protiodure de Fer selon Blancard; in U. S.; not in others.)

Dose.—3 to 8 grs.

SYRUPUS.

Iron Wire, 1; Iodine, 2; Refined Sugar, 28; Distilled Water, 13. Make a syrup with the sugar and 10 of the water, and keep it hot. Put into a strong soda-water bottle, covered with a cloth, the iron wire, the iodine, and 3 of water, shake them together until the froth of the mixture becomes white, filter whilst still hot into the syrup. The product should be made up by water to weigh 43 or to measure $31\frac{1}{2}$. Sp. g. 1·385.

Each fluid drachm contains $4\frac{1}{8}$ grains of the Iodide.

(Same as Brit. 1864; Lond. contains 5 grs. to each drm.; Edin. 6 grs.; U. S. $7\frac{1}{2}$ grs.; Austr. 7 grs.; Belg. and Fr. $\frac{1}{4}$ gr.; not in others.)

Dose.—20 to 60 minims.

Note.—It should be kept in well-filled bottles, for if there be much air in the bottle, the surface of the Syrup is decomposed and tinged with Iodine. May be exposed to the light with advantage.

FERRI OXIDUM MAGNETICUM.

MAGNETIC OXIDE OF IRON.

Syn. FERRI OXIDUM NIGRUM, *Edin.*

Magnetic Oxide of Iron, Fe_3O_4, or Fe_3O_4, combined with about 20 per cent. of water of hydration, and containing some Peroxide of Iron.

A dark greyish-black powder, strongly attracted by the magnet.

Solution of Persulphate of Iron, $5\frac{1}{2}$; Sulphate of Iron, 2; Solution of Soda, 80; Distilled Water, a sufficiency: dissolve the Sulphate of Iron in 40 of the water, and add to it the solution of Persulphate of Iron, then mix this with the solution of Soda, stirring them well together; boil the mixture, let it stand for two hours, stirring it occasionally, then put it on a calico filter, and when the liquid has drained away, wash the precipitate with distilled water until what passes through the filter ceases to give a precipitate

with Chloride of Barium; lastly dry the precipitate at a temperature not exceeding 120°.

Solubility: it dissolves without effervescence in Hydrochloric Acid, diluted with half its bulk in water.

Test.—20 grains moistened with Nitric Acid and calcined at a low red-heat, leave 15·8 grains of the Peroxide of Iron. 20 grains dissolved in Hydrochloric Acid continue to give a blue precipitate with the Ferridcyanide of Potassium, until 83 grain-measures of the volumetric solution of Bichromate of Potash have been added. That is to say, there should be sufficient protoxide present to reduce that quantity of bichromate.

Medicinal Properties.

In tic-douloureux and other neuralgic affections. Useful when it is desirable to continue the use of iron for a long time, or to give it in large doses.

(Edin. Ferri Oxidum Nigrum, with Ammonia; Dub. with Sulphate of Iron and Caustic Potash; Fr. Oxyde Noir de Fer; not in others.)

Dose.—5 to 10 grs. twice or thrice daily in water.

This preparation was in great repute with Dr. Jephson, and is certainly more to be depended on than the Sesquioxide: it is the Ferroso-ferric Oxide of Berzelius, a compound of Protoxide and Sesquioxide of Iron.

MISTURA FERRI AROMATICA.

Pale Bark, in powder, 4; Calumba, in powder, 2; Cloves, bruised, 1; Iron wire, 2; Compound Tincture of Cardamoms, 12; Tincture of Orange Peel, 2; Peppermint Water, 50: macerate the first four ingredients in the last for three days, agitating occasionally, filter, add the tinctures, and make up to 50.

Dose.—1 to 2 oz.

FERRI PERCHLORIDI FORTIOR LIQUOR.

STRONG SOLUTION OF PERCHLORIDE OF IRON.

Syn. Liquor Ferri Perchloridi, Brit. 1864.

Perchloride of Iron, Fe_2Cl_3, eq. 162·5, in solution in water.

Miscible with water and alcohol in all proportions.

Iron Wire, 2 oz.; Hydrochloric Acid, 12 oz.; Nitric Acid, 9 drms.; Distilled Water, 8 oz. Mix 8 of the Hydrochloric Acid with the Water, and pour the mixture on the Iron Wire, applying a gentle heat, so that the whole of the metal may be dissolved; filter the solution and add to it the remainder of the Hydrochloric and the Nitric Acid; heat the mixture briskly, until on the sudden evolution of red fumes the liquid becomes of an orange-brown colour, then evaporate by the heat of a water bath until it is reduced to 10 fluid ounces.

Test.—Sp. g. 1·338, more correctly 1·420.—A drachm diluted with 2 ounces of water, gives upon the addition of an excess of Solution of Ammonia, a reddish-brown precipitate, which when well washed and incinerated weighs 15·62 grains.

(Same as Brit. 1864; Belg. sp. g. 1·480; New Pr. 1·480 to 1·484, and contain 15 per cent. of Iron. Not in others.)

This preparation was made in 1864 with 6 drms. of sp. g. 1·5 Acid, which is equal to 8 drms. sp. g. 1·42 Acid, but 9 drms. are now ordered, to insure the peroxidation of the whole of the Iron. The resulting solution has, however, the sp. g. 1·420, and not 1·338, as stated in the Pharmacopœia. It is rather acid, and if desired to be more neutral, the solution can be evaporated lower, say to 4 or 5 oz., and then made up to 10 by the addition of water.

Preparations.

LIQUOR FERRI PERCHLORIDI. Of the same strength as Tinctura.

Strong solution of Perchloride of Iron, 1; Distilled Water, 3. =(1 in 4).

Dose.—10 to 30 minims.

(Fr. sp. g. 1·260.)

This preparation has been introduced in order to save the expense of the spirit used in the Tincture, which for hospital use may be worth consideration.

TINCTURA FERRI PERCHLORIDI.

Strong Solution of Perchloride of Iron, 1; Rectified Spirit, 3: mix. =(1 in 4).

Sp. g. 0·992, more correctly ·995.

(Same strength as Brit. 1864 and Lond. Tinctura Ferri Sesquichloridi, Edin. Tinctura Ferri Muriatis, and U. S. Tinctura Ferri Chloridi; one-third of the strength of Tinct. Ferri Sesquichloridi, Dub.; Belg. from the Salt and only half strength; not in others.)

The best formula for making Tinct. Ferri Perchlor. from the Salt is the following:—Crystallized Perchloride of Iron converted by Chlorine Gas, 8 oz.; Water 3½ oz.: dissolve, and it will measure 8 oz.; then add Rectified Spirit, 24 oz.: mix. =(1 in 4).

Medicinal Properties.

The Tincture of Iron has long been considered the most valuable of all the Iron preparations; it is given in diabetes, acting especially on the kidneys in Albuminuria, the urethra in gleet, and in giving tonicity to the bladder; in passive hæmorrhage, and as a general tonic, having properties in common with the numerous Salts of Iron; highly useful in Anæmia and Chlorosis. It is a powerful styptic.

Dose.—10 to 30 minims in Water, Infusion of Quassia, or Calumba, but it tinges Infusion of Chiretta and Hops, and changes to brown or black those of Chamomile, Cusparia, Gentian, Orange, Cascarilla, Cloves, Digitalis, Bark, and all astringent infusions.

If given during effervescence with Bicarbonate of Soda, 9 grains is about equal to 60 minims of Tincture.

Incompatibles.—Alkalies and their Carbonates, Lime Water, Carbonate of Lime, Magnesia and its Carbonate; astringent vegetables render it black, and mucilage decomposes it.

FERRI PERNITRATIS LIQUOR.

SOLUTION OF PERNITRATE OF IRON.

Pernitrate of Iron, Fe_2O_3, $3NO_5$, eq. 242, in solution in Water.

A clear solution, of reddish-brown colour.

Iron Wire, 1; Nitric Acid, 4½; Distilled Water, q. s.: dilute the Nitric

Acid with 16 of water, dissolve the Iron (take care to moderate the action by occasionally adding part of the water), and add water to filter 30.

Test.—Sp. g. 1·107. 1 drachm treated with an excess of Solution of Ammonia gives a precipitate, which, when washed, dried, and incinerated, weighs 2·6 grains. It gives no precipitate with the Ferridcyanide of Potassium—Indicating absence of Protoxide.

(Same as Brit. 1864 and Dub.; U. S. Liquor Ferri Nitratis, half the strength; Belg. 1 in 20, sp. g. 1·145; not in others.)

Medicinal Properties.

Tonic and astringent. Useful in chronic diarrhœa, especially when occurring in delicate and nervous females, when there are no inflammatory symptoms; also in menorrhagia; also both internally and as an injection in leucorrhœa, the injection being diluted so as to cause only slight heat and smarting.

Dose.—10 to 40 minims.

FERRI PEROXIDUM HYDRATUM.

HYDRATED PEROXIDE OF IRON.

Syn. FERRI PEROXIDUM HYDRATUM, Brit. 1864.

Fe_2O_3,HO, eq. 89; or Fe_2O_3,H_2O, eq. 178.

A dark brown powder, without taste.

Moist Peroxide of Iron dried at 212° F. and reduced to powder.

Solubility: dissolves completely though slowly with the aid of heat, in Hydrochloric Acid, diluted with half its volume of water.

Test.—The solution in Hydrochloric Acid gives no precipitate with Chloride of Barium, or with the Ferridcyanide of Potassium—indicating absence of Sulphuric Acid and Protoxide.

(In all the Pharmacopœias. Lond. Ferri Sesquioxidum; Edin. Ferri Oxidum Rubrum; Dub. Ferri Peroxidum; Austr. Ferrum Oxydatum Nativum Rubrum; Fr. Oxyde Rouge de Fer; Pr. Ferrum Hydricum.)

Dose.—5 to 30 grs.

Preparation.

EMPLASTRUM FERRI. *Syn.* EMPL. THURIS; EMPL. ROBORANS.

Peroxide of Iron, 1; Burgundy Pitch, 2; Litharge Plaster, 8: melt the pitch and plaster together, and stir in the oxide. =(1 in 11).

(Same as Brit. 1864 and Dub.; similar to Lond. Edin. and U. S.; not in others.)

Used as a strengthening plaster, and to afford mechanical support to relaxed muscles.

FERRI PEROXIDUM HUMIDUM.

MOIST PEROXIDE OF IRON.

Syn. FERRI PEROXIDUM HYDRATUM, Brit. 1864.

Hydrated Peroxide of Iron, $2\,Fe_2O_3,3\,HO$, eq. 187, with about 86 per cent. of uncombined water.

A soft moist pasty mass, of a reddish-brown colour.

Solution of Persulphate of Iron, 4; Solution of Soda, 33 or q. s.; Distilled Water, 20: mix the solution of Iron and the Water; pour the mixture into the solution of Soda, stirring occasionally for two hours; collect the precipitate on a calico filter, wash until it ceases to give a precipitate with Chloride of Barium. Keep it (without drying) in a porcelain pot, the lid being closed. Should be recently made.

Solubility: dissolves readily in Hydrochloric Acid without the aid of heat.

Test.—Free from grittiness. Leaves on calcination about 12 per cent. of Peroxide of Iron.

(In all the Pharmacopœias except Lond.; Fr. Peroxyde de Fer Hydratée; Pr. Ferrum Hydricum in Aqua.)

Dose.—¼ to ½ oz.

Medicinal Properties.

Not eligible as a ferruginous preparation. It is, however, valuable as an antidote to the poison of Arsenic; it operates by producing an insoluble, and therefore inert Subarseniate of Protoxide of Iron ($2FeO_3$ and $AsO_3 = 4FeO, AsO_5$).

Dose.—As an antidote, 2 to 4 drms. repeated until effective. A quantity equal at least to twelve times the supposed quantity of the poison taken may be given.

LIQ. FERRI PERSULPHAS.—*See* FERRI SULPHAS.

FERRI PHOSPHAS.

PHOSPHATE OF IRON.

Phosphate of Iron, $3FeO,PO_5$, eq. 179; or $Fe_3P_2O_8$, eq. 358; partially oxidated.

A slate-blue amorphous powder.

Sulphate of Iron, 3; Phosphate of Soda, 2½; Acetate of Soda, 1; boiling Distilled Water, 80. Dissolve the Iron in one half of the Water, and the Salts of Soda in the other half: mix and stir carefully. Transfer the precipitate to a calico filter, wash with hot distilled water until it ceases to give a precipitate with Chloride of Barium. Dry on porous bricks in a stove at a heat not exceeding 120° F. Keep in stoppered bottles.

Solubility: soluble in acids, insoluble in water.

Test.—If it is digested in Hydrochloric Acid with a lamina of pure Copper, a dark deposit does not form on the metal—indicating absence of Arsenic. 20 grains dissolved in Hydrochloric Acid continue to give a blue precipitate with red Prussiate of Potash until 250 grain-measures of Volumetric Solution of Bichromate of Potash have been added.

(Same as Brit. 1864, Austr. Belg.; Fr. Phosphate Ferroso-Ferrique, and U. S.; not in others.)

Medicinal Properties.

Tonic. Possesses the general properties of the ferruginous preparations.

Given with advantage in amenorrhœa, some forms of dyspepsia, diabetes, and rachitis. It diminishes voracious appetite; it invigorates and increases the power of digestion.

Dose.—5 to 10 grs.

Preparation.

SYRUPUS.

Granulated Sulphate of Iron, 224 grs.; Phosphate of Soda, 200 grs.; Acetate of Soda, 74 grs.; Dilute Phosphoric Acid, 5½ oz.; Refined Sugar, 8 oz.; Distilled Water, 8 oz. Dissolve the Sulphate of Iron in 4 ounces of the Water, and the Phosphate and the Acetate of Soda in the remainder: mix the two solutions, and, after carefully stirring, transfer the precipitate to a calico filter, and wash it with Distilled Water till the filtrate ceases to be affected by Chloride of Barium; then press the precipitate strongly between folds of bibulous paper, and add to it the Dilute Phosphoric Acid; as soon as the precipitate is dissolved, filter the solution, add the Sugar, and dissolve without heat. The product should measure exactly 12 ounces.

(Brit. 1864.)

Each fluid drachm contains about 1 grain of Phosphate.

Dose.—1 to 4 drms.

Not Officinal.

Syrupus Ferri Phosphatis Comp.—Parrish. This preparation is called Chemical Food, and contains in every fluid drachm 1 gr. Phosphate of Iron; 2½ grs. Phosphate of Lime, besides Soda and Potassa. Mr. Parrish, of Philadelphia, has published the formula of this very popular medicine, but no chemist appears to produce so perfect a preparation as Mr. Parrish himself, and the Author has therefore agreed to import it and to be his sole agent for Great Britain.

Dose.—1 to 2 drms.

Syrupus Ferri Hypophosphitis, *vide* Pharm. Journ. vol. vii. p. 440, new series.

Dose.—A fluid drachm.

FERRI SULPHAS.

SULPHATE OF IRON.

FeO,SO_3+7HO, eq. 139; or $FeSO_4,7H_2O$, eq. 278.

Pale bluish-green rhomboidal prisms, with little or no efflorescence.

Iron Wire, 4; Sulphuric Acid, 4; Distilled Water, 30. Pour the Water on the Iron placed in a porcelain capsule; add the Acid, and when the disengagement of gas has nearly ceased, boil for ten minutes. Filter through paper; in twenty-four hours separate the crystals; dry on filtering-paper placed on porous bricks; keep in stoppered bottles.

Solubility: soluble in water, 1 in 1½; the solution rapidly oxidizes on exposure; insoluble in Alcohol and Proof Spirit, hence it cannot be dissolved in tinctures.

Test.—Crystals free from opaque rust-coloured spots, and dissolving in water without leaving any ochry residue. The aqueous solution gives no precipitate with Sulphuretted Hydrogen, and one nearly white with Ferrocyanide of Potassium.

Medicinal Properties.

In harmony with the properties of iron salts in general, it is a powerful astringent, but is apt to irritate the stomach.

(In all the Pharmacopœias.)

Dose.—3 to 5 grs. in pill, or recent solution.

Dr. F. Farre gives 5 grains, with 3 grains of Sulphate of Quinia, four or five times a day, for enlarged spleen.

Preparation.

FERRI SULPHAS EXSICCATA.

Sulphate of Iron exposed in a porcelain capsule to a moderate heat, which may be raised to 400°. Reduce to powder. Keep in stoppered bottles.

(Same as Brit. 1864; Edin. Dub. U. S. Belg.; not in others.)

Prescribed in pills. 3 grains, which are equal to 5 of the crystallized salt, make a nice pill with 2 grains of Manna.

Dose.—½ to 3 grs.

FERRI SULPHAS GRANULATA.

GRANULATED SULPHATE OF IRON.

$FeO,SO_3,+7HO$, eq. 139, or $FeSO_4, 7H_2O$, eq. 278.

Small granular crystals of a pale-green colour, which are not so liable to become brown as those of the Ferri Sulphas.

Iron, 4; Sulphuric Acid, 4; Distilled Water, 30; Rectified Spirit, 8. Pour the Water on the Iron placed in a porcelain capsule; add the Acid, and when the disengagement of gas has nearly ceased, boil for ten minutes; filter the solution into a jar containing the spirit, stirring the mixture so that the salt shall separate in minute granular crystals. Pour off the liquid, place the crystals on filtering-paper over porous bricks to dry. Keep in stoppered bottles.

Less liable to oxidation than Ferri Sulphas.

Solubility in water, 1 in 1½; insoluble in Rectified Spirit.

Test.—Free from opaque, rust-coloured spots, and dissolving in water without leaving any ochry residue. The aqueous solution gives no precipitate with Sulphuretted Hydrogen, and one nearly white with Ferrocyanide of Potassium—indicating absence of Copper and Persulphate of Iron.

Medicinal Properties.—Same as Ferri Sulphas.

(Same as Brit. 1864 and Dub.; not in others.)

Dose.—3 to 5 grs.

Preparation.

LIQ. FERRI PERSULPHATIS. SOLUTION OF PERSULPHATE OF IRON.

Sulphate of Iron, 8; Sulphuric Acid, ¾; Nitric Acid, ¾; Distilled Water, 12. Add the Sulphuric Acid to 10 of the Water, and dissolve the Iron in the mixture with the aid of heat. Mix the Nitric Acid with the remaining 2 of the Water, and add the dilute Acid to the Solution of Sulphate of Iron. Concentrate the whole by boiling, until, by the sudden disengagement of ruddy vapours, the liquid ceases to be black, and acquires a red colour. A

drop of the solution is now to be tested with Red Prussiate of Potash, and if a blue precipitate be formed a few additional drops of Nitric Acid should be added and the boiling renewed, in order that the whole may be converted into Persulphate of Iron. When the solution is cold, make up the quantity to 11 by the addition, if necessary, of Distilled Water.

Introduced for making several preparations of Iron.

N.B.—The quantity of Nitric Acid ordered is much too small to peroxidize the Iron

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FERRUM REDACTUM.

REDUCED IRON.

Metallic Iron, with a variable amount of Magnetic Oxide of Iron. A fine greyish-black powder, strongly attracted by the magnet, and exhibiting metallic streaks when rubbed with firm pressure in a mortar. Made by passing dry Hydrogen over Peroxide of Iron in a gun-barrel. It must be carefully preserved from the air,

Solubility: it dissolves in Hydrochloric Acid with the evolution of Hydrogen.

Test.—10 grains added to an aqueous solution of 50 grains of Iodine, and 50 grains of Iodide of Potassium, and digested with them in a small flask at a gentle heat, leave not more than 5 grains undissolved, which should be entirely soluble in Hydrochloric Acid.

The Author finds between 4 and 5 grains are left, which are Magnetic Oxide, and therefore little more than half is *reduced Iron.*

(Same as Brit. 1864; Dub. and U. S. Ferri Pulvis; corresponding to this is powdered iron-filings in Austr. Belg. Pr. Fr.; not in others.)

Medicinal Properties.

It is one of the most powerful remedies in restoring the condition of the blood in all anæmic states of the system. It does not, however, possess the astringent properties of other preparations of Iron, and therefore cannot be used as a substitute in passive hæmorrhage. It is chiefly employed in chlorosis, amenorrhœa, chorea, and enlargement of the spleen following intermittent fever. There is no pulverulent state of Iron so convenient as this for children, as it has no taste, and a very small dose is required.

Dose.—1 to 5 grs. several times daily, in powder or pill, or for children ¼ to 1 gr.

1 grain of this is equal, medicinally, to 5 grains of Citrate of Iron.

TROCHISCI FERRI REDACTI.

Reduced Iron, 720 grs.; Refined Sugar, in powder, 25 oz.; Gum Acacia, in powder, 1 oz.; Mucilage of Acacia, 2 oz.; Distilled Water, 1 oz., or sufficient. Mix the Iron, Sugar, and Gum, and add the mucilage and Water to form a proper mass. Divide it into 720 lozenges, and dry them in a hot-air chamber with a moderate heat.

Each lozenge contains 1 gr. of reduced Iron.

Dose.—1 to 6 lozenges.

A new preparation.

FERRUM TARTARATUM.

TARTARATED IRON.

Tartrate of Iron and Potash, $Fe_2O_3, KO, C_8H_4O_{10} + HO$; eq. 268.

Thin transparent scales of a deep garnet colour.

Solution of Persulphate of Iron, $5\frac{1}{2}$; Solution of Ammonia, 10 or q. s.; Acid Tartrate of Potash in powder, 2; Distilled Water, q. s. Add the Iron to 40 of the Water; gradually pour this into the Solution of Ammonia previously mixed with 60 of water, stirring occasionally during two hours; collect the precipitate on a calico filter, wash it with distilled water until that which passes through ceases to become turbid with Chloride of Barium: mix intimately the precipitate with the Acid Tartrate of Potash in a porcelain dish, and let it stand twenty-four hours, then apply a gentle heat not exceeding 140°, add gradually 20 of Distilled Water, and stir constantly till nothing more will dissolve: filter and evaporate at a temperature not exceeding 140° to the consistence of syrup; dry it in thin layers on glass plates at a temperature not exceeding 120°. Preserve the dried flakes in stoppered bottles.

Solubility in water, 1 in 4; sparingly in spirit.

Test.—By incinerating 50 grains of this preparation at a red-heat, and washing what is left with distilled water and again incinerating, a residue of Peroxide of Iron is obtained, weighing 15 grains.

(Same as Brit. 1864, Lond. and U. S. Ferri Potassio-Tartras; Edin. and Dub. Ferrum Tartarizatum; Fr. Tartras Ferrico-Potassicus; Pr. Ferro-kali Tartaricum.)

Dose.—5 to 10 grs.

VINUM FERRI.

Fine Iron Wire (No. 35), 1 oz.; Sherry, 20 oz.: digest thirty days with frequent agitation.

Dose.—1 to 4 drms.

The bottle to be corked, but the wire not wholly immersed.

Medicinal Properties.

Useful in restoring the blood, when a slight astringent is desired. May be prescribed with alkalies.

INCOMPATIBLES.—Mineral Acids, Lime Water, and all astringent vegetable preparations.

FICUS.

FIG.

The dried fruit of the *Ficus Carica*, imported from Smyrna.

Medicinal Properties.

Nutritious, laxative, and demulcent. Chiefly used medicinally in constipation. Cut open and heated, it is a convenient suppurative cataplasm.

Contained in Conf. Sennæ.

FILIX MAS.

MALE FERN.

The dried rhizoma, with the bases of the footstalks and portions of the root-fibres of *Aspidium* or *Nephrodium Filix-mas*, collected in summer. Indigenous.

Medicinal Properties.

The powder of the rhizoma is slightly tonic and astringent; chiefly used as an anthelmintic and in tænia. It apparently acts by destroying the worm, the expulsion being aided by purgatives.

(In all the Pharmacopœias; Fr. Fougère.)

Dose.—Of the powder, 60 to 180 grs.

Preparation.

EXTRACTUM LIQUIDUM. *Syn.* OIL OF MALE FERN.

Fern Root in coarse powder, 1; Ether, $2\frac{1}{2}$, or a sufficiency; pack closely in a percolator with 1 of the Ether, add the rest at intervals until it passes through colourless; distil off the Ether, and the liquid extract remains.

(Brit. 1864, Austr. Belg.; Fr. Extrait éthéré de Fougère Mâle; Pr. Extr. Filicis Æthereum; not in others.)

Dose.—30 to 60 minims in milk, or made into an emulsion with 1 drm. of very fresh mucilage, or $\frac{1}{2}$ drm. of powdered Acacia.

Should be given on an empty stomach.

May be given in capsules, 15 minims in each.

FŒNICULI FRUCTUS.

FENNEL FRUIT.

The fruit of the *Fœniculum dulce*, imported from Malta.

Medicinal Properties.

Stimulant, aromatic and carminative. In action similar to Anise. Much employed as a corrigent of less agreeable medicines. In infantile cases the infusion is frequently employed as an enema for flatus.

Preparation.

AQUA.

Sweet Fennel Fruit bruised, 1; Water, 20: distil 10. =(1 in 10).

(Same as Belg.; Brit. 1864 and Edin. 1 in 8; Austr. 1 in 6; Pr. 1 in 30; Dub. with Essence; U. S. with Oil 1 in 512; not in others.)

Dose.—1 to 2 oz.

As Fennel is retained in the Pharmacopœia, it might as well have still been used instead of Caraway for the Confection of Pepper, and thus preserve the flavour that it had before.

Not Officinal.

FUCUS VESICULOSUS.

Bladder-wrack collected from the rocks by the seaside and dried.

EXTRACTUM LIQUIDUM.—Take of the plant dried, but still limp, 16; Rectified Spirit, 5: digest for seven days, press and filter.

Dose.—A teaspoonful, given for obesity; it also diminishes glandular swellings in scrofulous cases.

GALBANUM.

GALBANUM.

A gum resin obtained from an umbelliferous plant; imported from India and the Levant; in masses of greenish-yellow or reddish tears, translucent. Usually heated to 212° F., and strained before using.

Sp. g. 1·212.

Medicinal Properties.

Similar to Assafœtida, but less powerful. A stimulating expectorant. Chiefly used in chronic affections of the bronchial mucous membranes; externally as a plaster to indolent swellings to promote resolution or suppuration.

(In all the Pharmacopœias.)

Preparations.

EMPLASTRUM.

Galbanum, 1; Ammoniac, 1; melt together and strain, then add Yellow Wax, 1; Litharge Plaster, 8, previously melted together. =(1 in 11).

(Same as Brit. 1864 and Edin.; not in Dub.; contained in Lond. and all the foreign Pharmacopœias, but the formulæ are different; Fr. Emplâtre Dyachylon Gommé.)

PILULA.

The Pilula Galbani Composita has found a place in the London Pharmacopœia for the last half-century, and would naturally be looked for under Galbanum; its name has been changed to Pilula Assafœtidæ Composita, and its composition somewhat altered. *See* ASSAFŒTIDA.

GALLA.

GALLS.

Excrescences on *Quercus infectoria*, caused by the punctures and deposited ova of *Diplolepis Gallæ-Tinctoriæ;* from the Mediterranean and the East Indies.

Solubility: all the soluble matter of Galls is taken up by forty times their weight of boiling water, and the residue is tasteless.

Galls contain about 35 per cent. of Tannin or Tannic Acid, and 5 per cent. of Gallic Acid, to which their therapeutic qualities may be attributed.

Medicinal Properties.

Powerfully astringent. Useful in hæmorrhages, as menorrhagia, hæmaturia, and hæmoptysis, also in increased mucous and other discharges. Externally to suppress hæmorrhage from the gums, nose, etc.; to lessen the discharge from mucous membranes, as in gleet, leucorrhœa, etc.; as a gargle, lotion, injection, or decoction, more or less diluted.

Dose.—(Of powder) 10 to 20 grs. several times a day.

(In all the Pharmacopœias; Fr. Noix des Galles.)

INCOMPATIBLES.—The Mineral Acids, Salts of Iron and Lead, Sulphate of Copper, Nitrate of Silver, Carbonates of Potash and Soda, Lime Water, Tartar Emetic, Infusion Cinchona, Calumba, Cusparia, Ipecacuanha, and Opium.

Preparations.

ACIDUM GALLICUM.—*See* ACIDUM GALLICUM.

ACIDUM TANNICUM.—*See* ACIDUM TANNICUM.

TINCTURA.

Galls bruised, 1; Proof Spirit, 8: macerate for forty-eight hours with 6 of the Spirit, agitating occasionally, pack in a percolator, let it drain, and then pour on the remaining Spirit; when it ceases to drop, wash the marc with Spirit to make up 8. =(1 in 8).

(Same as Brit. 1864, Lond. Edin. and Dub.; U. S. 1 in $7\frac{5}{8}$; not in others.)

Dose.—$\frac{1}{2}$ to 2 drms.

UNGUENTUM.

Galls in very fine powder, 80 grs.; Benzoated Lard, 1 oz.: mix. =(1 in $6\frac{1}{2}$).

(Same strength as Brit. 1864; Dub. and U. S. 1 in 8; not in others.)

A useful application for hæmorrhoids.

UNGUENTUM GALLÆ CUM OPIO.

Ointment of Galls as above, 1 oz.; Opium in powder, 32 grs.: mix. =(Opium, 1 in $14\frac{2}{3}$).

(Same as Brit. 1864, Lond. Ung. Gallæ Comp. Galls, 2, Opium, $\frac{1}{2}$, Lard, 16; Edin. Galls, 2, Opium, 1, Lard, 8; not in others.

Applied to painful hæmorrhoids.

Not Officinal.

DECOCTUM GALLÆ (Lond.).—Bruised Galls, $2\frac{1}{2}$; Distilled Water, 40: boil to 20 and strain. =(1 in 8).

A most useful astringent lotion to suppress hæmorrhage from the gums or nose, and to lessen discharges from mucous surfaces.

Suppositoria contain 5 grs. powdered Galls and 1 gr. Opium each.

GENTIANÆ RADIX.

GENTIAN ROOT.

The dried root of the *Gentiana lutea*, collected in the Alps, Apennines, and other mountainous districts of Europe.

Medicinal Properties.

Used in all cases of pure debility of the digestive organs, or when a general tonic is required.

Dose.—(Of the powder) 10 to 40 grs.

(In all the Pharmacopœias; Fr. Gentiane.)

Preparations.

EXTRACTUM.

Gentian sliced, 1; boiling Distilled Water, 10: macerate two hours, boil fifteen minutes, strain, and evaporate to a soft pilular consistence.

A good substance to add to powders to form them into pills.

Dose.—10 to 15 grs.

(Same as Brit. 1864, Lond. Edin. and Dub.; Fr. with cold water; Pr. U. S.; not in others.)

INFUSUM COMPOSITUM.

Gentian, 1; Orange Peel, cut small, 1; fresh Lemon Peel, 2; Boiling Water, 80: infuse one hour and strain. =(1 in 80).

(Same as Lond.; Dub. 1 in 40; not in others.)

Dose.—1 to 2 oz.

MISTURA.

Gentian sliced, $\frac{1}{4}$ oz.; Bitter Orange Peel bruised, 30 grs.; Coriander, 30 grs.; Proof Spirit, 2 oz.; cold Distilled Water, 8 oz.: pour the spirit on the ingredients, and after two hours add the Water. Infuse for two hours and strain.

(Same as Infusum Compositum of Brit. 1864, Edin., and U. S.; is not strong enough to keep without change for more than fifteen or sixteen days; not in others.)

Dose.—$\frac{1}{2}$ to 1 oz.

TINCTURA COMPOSITA.

Gentian bruised, $1\frac{1}{2}$; Bitter Orange Peel, bruised, $\frac{3}{4}$; Cardamom seeds, bruised, $\frac{1}{4}$; Proof Spirit, 20: macerate for forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator, let it drain, and then pour on the remaining spirit; when it ceases to drop, wash the marc with spirit to make up 20. =(1 in $13\frac{1}{3}$).

(Same as Brit. 1864, Dub. Fr. and U. S.; Lond. and Edin. weaker, 1 in 16; (Pr. Tinctura Simplex, 1 and 6; Belg. 1 in 5 by weight;) not in Austr.)

Dose.—1 to 2 drms.

INCOMPATIBLES.—Sulphate of Iron, Nitrate of Silver, and Lead Salts.

GLYCERINUM.

GLYCERINE.

A sweet principle, $C_6H_8O_6$, or $C_3H_8O_3$, eq. 92, obtained from fats and fixed oils. A colourless, thick fluid, oily to the touch, without odour, of a sweet taste.

Solubility: in all proportions with water and Alcohol, but insoluble in Chloroform, Ether, and Oils. Combines with Sulphuric Acid, U. S. Ph.

It possesses great powers as a solvent, and is an excellent excipient for many medicinal substances. It dissolves its own weight of Borax, it also dissolves Bromine and Iodine, the Iodide of Sulphur, the Chlorides of Potassium and Sodium, the fixed alkalies, some of the alkaline earths, and a large number of neutral salts. It also dissolves the vegetable acids, and either suspends or dissolves the vegetable alkaloids. Many solutions are made with it for medicinal purposes, as of the Salts of Morphia, Quinia, Strychnia, Veratria, Atropia, Tannic and Gallic Acids, and Arsenic.

It is antiseptic, 1 part to 10 Water, preserving animal substances equal to spirit.

Test.—Sp. g. 1·250.

(Same as U. S.; Brit. 1864, Dub. and Fr., sp. g. 1·260; Pr. sp. g. 1·230; Belg.; not in others.)

It may be obtained of a specific gravity of 1·270, and even of 1·280, though with great difficulty; this very concentrated state is never required in medicine.

Medicinal Properties.

Internally it is nutrient and demulcent. It has been proposed as a substitute for Cod Liver Oil, but its nutrient properties are far inferior. It is sometimes employed as a sweetening agent in the place of syrup.

As an external remedy, it is highly valued, chiefly from its emollient and undrying properties. In skin diseases where emollient and soothing applications are required, as pityriasis, lepra, herpes, eczema, psoriasis, prurigo, and lichen. Useful as a moist dressing for wounds. Excellent for chilblains.

Used in poultices ($\frac{1}{4}$ or $\frac{1}{16}$), it keeps them soft for a long time.

Introduced with cotton, it relieves deafness arising from dryness of the external meatus.

Dose.—10 minims to 1 drm. 1 to 2 drms. Br. Ph.

Preparations.

GLYCERINUM ACIDI CARBOLICI	1 acid in $4\frac{1}{2}$.
GLYCERINUM ACIDI GALLICI	1 acid in $4\frac{1}{2}$.
GLYCERINUM ACIDI TANNICI	1 acid in $4\frac{1}{2}$.
GLYCERINUM AMYLI	1 Starch in $8\frac{1}{2}$.
GLYCERINUM BORACIS	1 Borax in $4\frac{1}{2}$.

Contained in Linim. Potass. Iodidi cum Sapone.

The formulas for these are given under the several names quoted.

Not Officinal.

Glycerine Cream for Chilblains.—Glycerine, 1; Soft Soap, 1; Cherry-laurel Water, 1: mix.

Glycerine Cream with Camphor.—Glycerine, 2; Camphor, 1; Rectified Spirit, 1: mix.

Glycerine Ointment.—Glycerine, 8; Spermaceti, 4; White Wax, 1; Oil of Almonds, 16: add the Glycerine to the melted ingredients, and stir briskly till cold.

For chaps and excoriations.

Mr. Sarg, of Vienna, has introduced the following:—
Toilet Glycerine, very pure and slightly scented.
Liquid Glycerine Soap, in bottles, } These are especially valued for shaving.
Solid Glycerine Soap, in tins, }
Toilet Glycerine Soap, beautifully transparent, and containing nearly half its weight of Glycerine; emollient; imparting a softness to the skin, and preserving it from the effects of the weather.

GLYCYRRHIZÆ RADIX.

LIQUORICE ROOT.

The root or underground stem of the *Glycyrrhiza glabra*, fresh and dried; cultivated in Britain.

Medicinal Properties.

An excellent demulcent as a decoction in catarrhal affections, irritation of the mucous membrane of the bowels and urinary passages. A useful adjuvant to decoctions of bitter or irritating vegetable substances. In the form of extract and its solution it is a domestic remedy for cough.

(In all the Pharmacopœias.)

Preparation.

EXTRACTUM.

Liquorice Root in coarse powder, 1; cold Distilled Water, 5; macerate the root in half of the water for twelve hours, strain and press; again macerate the pressed marc with the remainder of the water for six hours, strain and press; mix the strained liquors; heat to 212° F., strain and evaporate to a pill consistence.

(Same as Brit. 1864, Edin. Dub. U. S. and Fr. Extr. Réglisse; Lond. Austr. Belg. Liquiritia, fresh root; Pr. from Solazzi Juice.)

Dose.—½ to 1 drm.

It is properly ordered to be prepared from the dried root, for when made from the fresh root it cannot be strained bright, and is liable to fermentation.

The Solazzi Juice is made from the *Glycyrrhiza Echina*.

Contained in Confect. Sennæ, Decoctum Aloes Co., Mist. Sennæ Co., Tinct. Aloes, Trochisci Opii.

GOSSYPIUM.

COTTON WOOL.

The hairs of the various seeds of *Gossypium* carded.

Preparation.

Pyroxylin.

GRANATI RADICIS CORTEX.

POMEGRANATE ROOT BARK.

The bark of the root of the *Punica Granatum* dried: chiefly imported dried from the south of Europe.

Medicinal Properties.

Astringent and anthelmintic. It is considered more effective than turpentine in expelling tapeworm, and is less likely to cause nausea. Both in a green and dry state it is found equally effective in India. In this country the Male Fern is more relied on.

(In all the Pharmacopœias, Fr. Grenadier.)

Preparation.

DECOCTUM.

Pomegranate Root, fresh or dry, 1; Distilled Water, 20; boil to 10 and strain. =(1 in 10).

(Same as Brit. 1864 and Lond.; Belg. 1 and 6, boil to 4; not in others.)

Dose.—1 to 2 oz.

INCOMPATIBLES.—Alkalies, Lime Water, Metallic Salts, Gelatine.

GUAIACI LIGNUM.

GUAIACUM WOOD.

The wood of the *Guaiacum officinale* sliced, or coarsely turned, imported from St. Domingo and Jamaica.

Test.—Nitric Acid applied to the dark or central wood produces a bluish-green colour.

(In all the Pharmacopœias; Fr. Bois de Gayac.)

Not often prescribed alone.

Contained in Decoctum Sarsæ Compositum.

GUAIACI RESINA.

GUAIAC RESIN.

The resin obtained from the stem of the *Guaiacum officinale* by natural exudation, by incision, or by heat.

In large masses of brownish or greenish-brown colour; fractured surface resinous, translucent at the edges.

Test.—A solution in Rectified Spirit strikes a clear blue colour when applied to the inner surface of a paring of raw potato.

Medicinal Properties.

A stimulant diaphoretic and alterative. It is employed in chronic forms of rheumatism accompanied by great debility, in which the symptoms are relieved by warmth.

Generally prescribed in composition with other medicines.

(In all the Pharmacopœias.)

Dose.—10 to 30 grs. three or four times a day until it causes hot sweating, with or without purging.

Contained in Pilula Hydrargyri Subchloridi Composita.

Preparations.

MISTURA GUAIACI.

Guaiac Resin in powder, 2; Sugar, 2; Gum Arabic powder, 1; Cinnamon Water, 80: triturate, adding the Cinnamon water gradually. =(1 in 40).

(Same as Brit. 1864; Lond. and Edin. 1 in 7; not in others.)

Dose.—½ to 2 oz.

TINCTURA GUAIACI AMMONIATA.

Guaiac Resin, in fine powder, 4; Aromatic Spirit of Ammonia, 20: macerate seven days, filter, and wash the filter with Spirit to make up 20. =(1 in 5).

(Same as Brit. 1864; U.S.; Lond. and Edin. rather weaker; Belg. 1 in 8, with pure Ammonia and Spirit, by weight; not in others.)

Dose.—½ to 1 drm., either with mucilage or yolk of egg, to form an emulsion.

INCOMPATIBLES.—Mineral Acids, Spirit of Nitrous Ether.

HÆMATOXYLI LIGNUM.

LOGWOOD.

The heart of the *Hæmatoxylum Campechianum* sliced, imported from Campeachy in Central America, from Honduras and Jamaica. The cherry-red inner wood is the part used.

Medicinal Properties.

A mild astringent, without irritating properties, useful in atonic dyspepsia and ordinary chronic diarrhœa and dysentery, and in passive hæmorrhages.

(Brit. 1864; Lond. Edin. Dub. U.S.; Fr. Bois de Campéchu; not in others.)

Preparations.

DECOCTUM.

Logwood in chips, 1 oz.; Cinnamon in powder, 60 grs.; Distilled Water, 20 oz.; boil ten minutes, adding the Cinnamon towards the end, strain, and pour on the contents of the strainer sufficient water to make up 20 oz. =(1 in 20)

Iron vessels should not be used.

(Same as Brit. 1864; Edin. and U.S.; Lond. and Dub. stronger and without Cinnamon; not in others.)

Dose.—1 to 2 oz.

EXTRACTUM.

Logwood in fine chips, 1; boiling Distilled Water, 10: macerate twenty-four hours, boil to 5, strain and evaporate to an Extract. Iron vessels should not be used.

(Same as Brit. 1864; Lond. Edin. and U.S.; not in others.)

Dose.—10 to 30 grs.

INCOMPATIBLES.—Mineral Acids, Metallic Salts, Lime Water, Tartar Emetic.

HEMIDESMI RADIX.

HEMIDESMUS ROOT.

The root of the *Hemidesmus Indicus*, or Indian Sarsaparilla, dried; imported from India.

Medicinal Properties.

Diuretic. Useful as an alterative in some diseases of the kidneys.

It was brought to England by Dr. Ashburner about the year 1830, and was prescribed for skin diseases and indigestion, like Sarsaparilla, but it did not prove very satisfactory, and is now used chiefly as a flavouring agent.

(Brit. 1864, Dub.; not in others.)

Preparation.

SYRUPUS.

Hemidesmus, bruised, 1; Refined Sugar, 7; boiling Distilled Water, 5: infuse four hours, strain, and add the Sugar; dissolve. The product should weigh $10\frac{1}{2}$ and measure 8. Sp. g. 1·335. =(1 in 8).

(Same as Brit. 1864 and Dub.; not in others.)

Dose.—1 to 4 drms.

HIRUDO.

THE LEECH.

Sanguisuga officinalis, the Speckled Leech (English Leech).

S. medicinalis, the Green Leech, imported chiefly from Hamburg. Also collected in large numbers in Spain, France, Italy, and Hungary.

The *S. officinalis*, belly greenish-yellow, spotted with black. *S. medicinalis*, belly olive-green, not spotted. Fr. Sangsue médicinale.

Bleeding from leech-bites is sometimes difficult to stop. The following remedies have been applied with advantage:—Matico Leaf, Solution of Perchloride of Iron, Nitrate of Silver Point, and saturated Solution of Alum.

HORDEUM DECORTICATUM.

PEARL BARLEY.

The decorticated seeds of the *Hordeum distichon*, cultivated in Britain.

Wholly destitute of Hordein, abounding in starch, with some sugar, gluten, and gum. Fr. Orge Perlé.

(Brit. 1864.)

Preparation.

DECOCTUM.

Pearl Barley, 1; wash the Barley with cold water, then add Distilled Water, 15: boil twenty minutes, and strain.

Medicinal Properties.

Demulcent, used as a drink in the sick room.

(Same as Brit. 1864, Lond. Dub. and U. S.; Belg. half the strength; Fr. Tisane d'Orge; not in others.)

HYDRARGYRUM.

MERCURY.

Hg; eq. 100.

A brilliantly-lustrous white metallic liquid, becoming solid at −39° F. Sp. g. 13·5.

From China, Almaden in Spain, and Idria in Carniola; also from South America. It is sometimes found pure, but it is chiefly obtained from its sulphuret (native cinnabar) by distillation.

Mercury, as imported, is, after being squeezed through leather, nearly free from impurities. It was first employed medicinally by the Arabian physicians Avicenna and Rhazes, but they only ventured to use it externally against vermin and cutaneous diseases. We are indebted to that renowned empiric Paracelsus for its administration internally (*Pereira, Mat. Med.* 1849). The equivalent (100) is adopted in this work of Pereira. Calomel is there called the Subchloride of Mercury, and Corrosive Sublimate the Perchloride.

The British Pharmacopœia, 1867, has adopted these terms.

Unfortunately, the descriptive name Chloride of Mercury, applied to Calomel in former Pharmacopœias, was by the British Pharmacopœia 1864 applied to the Corrosive Sublimate. This, although, strictly speaking, correct, has given offence to the profession from the liability to which prescribers are exposed of having prescriptions made up with the Corrosive Sublimate instead of Calomel, which, from long familiarity with the London Pharmacopœia, they intended when prescribing Hydrargyri Chloridum. No compounder of medicines however, with a common knowledge of doses, would be likely to commit such an error.

(In all the Pharmacopœias except Austr.)

Test.—Entirely volatile with heat, leaving no residue.

INCOMPATIBLES and ANTIDOTES will be found at page 136.

Medicinal Properties.

Mercury as a metal is seldom given alone. In a state of minute subdivision with Chalk, however, it has the effect of increasing the various secretions, its influence upon the salivary glands being the ordinary index of the amount of its action. It is cholagogue and purgative, and powerfully affects the mucous membranes of the intestinal canal. It causes the absorption and prevents the formation of morbid fluids, and is itself absorbed in all the tissues of the body.

It is used in congestion of the liver, kidneys, etc., in acute and chronic inflammation, and as a depletive in fevers. Of great use in syphilis, though frequently followed by serious and even fatal consequences.

As an alterative, it is a safe and efficient medicine.

Externally, as a topical stimulant to indurated and chronically-inflamed parts, and sometimes for introducing the mineral into the system.

Contained in Hydrargyrum cum Creta and Hydrargyrum Ammoniatum.

Preparations.

EMPLASTRUM.

Mercury, 3 oz.; Olive Oil, $\frac{1}{8}$ oz.; Sublimed Sulphur, 8 grs.; Lead Plaster, 6 oz.: heat the Oil, add the Sulphur to it, gradually stirring till they unite; add the Mercury and triturate till its globules disappear; then add to the mixture the Lead Plaster, previously liquefied, and mix the whole thoroughly. =(1 in $3\frac{2}{3}$).

(In all the Pharmacopœias.)

EMPLASTRUM AMMONIACI CUM HYDRARGYRO.

Ammoniac, 12 oz.; Mercury, 3 oz.; Olive Oil, 1 drm.; Sulphur, 8 grs.: heat the Oil, and add the Sulphur to it gradually, stirring till they unite. With this mixture triturate the Mercury until globules are no longer visible; and lastly add the Ammoniac, previously liquefied by heat, mixing the whole carefully. =(nearly 1 in 5).

Applied as a discutient to glandular swellings, syphilitic nodes, and in chronic synovitis.

(Same as Brit. 1864; about the same strength as Lond. Dub. and U. S.; not in others.)

LINIMENTUM.

Ointment of Mercury, 1; Solution of Ammonia, 1; Liniment of Camphor, 1: melt the ointment in the liniment, add the Ammonia, and shake them together. =(1 Ointment in 3, or 1 of Mercury in 6).

(Same as Brit. 1864 and Lin. Hydrarg. Co. Dub.; similar to Lond.; not in others.)

A stimulating Liniment, applied to indolent ulcers, applied with lint in the armpits, a sure mode of producing salivation.

PILULA.

Mercury, 2; Confection of Roses, 3; Decorticated Liquorice Root in fine powder, 1: rub the Mercury with the Confection of Roses until metallic globules are no longer visible, then add the Liquorice, and mix the whole well together. =(1 in 3).

(Same as Brit. 1864, Lond. Edin. Dub. Fr. and U. S.; Belg. Pilulæ Hydrargyricæ, 3 grs. contain 1 gr. of Mercury; not in Austr.)

Dose.—3 to 6 grs. as an alterative, 10 grs. as a purgative.

SUPPOSITORIA.

Ointment of Mercury, 60 grs.; Benzoated Lard, 20 grs.; White Wax, 20 grs.; Oil of Theobroma, 80 grs.: melt all but the Mercurial Ointment together, then add the Ointment of Mercury, and stir till well mixed, and immediately pour into moulds 15 grs. each, dividing the mass into 12 equal parts.

Each suppository contains 5 grs. of Mercurial Ointment.

A new preparation.

UNGUENTUM.

Mercury, 16; Prepared Lard, 16; Prepared Suet, 1: rub them together until metallic globules cease to be visible. =(nearly 1 in 2).

(Same as Brit. 1864, Lond. Edin. and Dub.; U. S. Austr. Belg. and Fr.; Fr. has also Pommade Mercuriale Simple, 1 in 4; Pr. Ung. Hydr. Ciner., 1 in 3.)

UNGUENTUM HYDRARGYRI COMPOSITUM.

Mercurial Ointment, 6; Yellow Wax, 3; Olive Oil, 3; Camphor, 1½: melt the Wax and Oil, and when the mixture is nearly cold, add the Camphor in powder and the Ointment of Mercury, and mix.

This is Scott's celebrated absorbent Ointment, the Soap Cerate being replaced by the Oil and Wax.

It is admirable Ointment to apply to carbuncles and other indolent tumours.

Not Officinal.

UNGUENTUM HYDRARGYRI CUM AMMONIÆ MURIATE (Dupuytren).—Mercurial Ointment, 16; Muriate of Ammonia in fine powder, 1: mix.

Applied to chronic glandular enlargements.

HYDRARGYRI IODIDUM RUBRUM.

RED IODIDE OF MERCURY.

Syn. HYDRARGYRI BINIODIDUM, *Lond. and Edin.*

HgI, eq. 227; or HgI_2, eq. 454.

A crystallized powder of a vermilion colour.

Corrosive Sublimate, 4; Iodide of Potassium, 5; boiling Distilled Water, 80: dissolve the Corrosive Sublimate in 60, and the Iodide of Potassium in the remainder of the water, and mix the two solutions. When the temperature has fallen to that of the atmosphere, decant the supernatant liquor from the precipitate, and having collected the latter in a filter wash it twice with cold distilled water, and dry it at a temperature not exceeding 212° F. A very slight excess of Iodide of Potassium is necessary to convert all the Mercury into Iodide. A large excess combines with the Biniodide, and forms a soluble double salt (HgI, KI).

Solubility: almost insoluble in Water; dissolves sparingly in Alcohol, but entirely in Ether, or in the aqueous solution of Iodide of Potassium, Iodide of Zinc, and Chloride of Sodium.

Test.—It sublimes entirely at a red-heat, when it becomes yellow; it resumes its scarlet colour on cooling.

Medicinal Properties.

A powerful irritant poison, similar to the green iodide, only much more active. It is used internally in the same cases as corrosive sublimate; externally in scrofula and syphilis.

(In all the Pharmacopœias except Lond.; Edin. Hydrargyri Biniodidum; Pr. Hydrargyrum Biiodatum Rubrum.)

Dose.—$\frac{1}{16}$ increasing to $\frac{1}{4}$ gr.

Best given in a solution of Iodide of Potassium.

Preparation.

UNGUENTUM HYDRARGYRI IODIDI RUBRI.

Red Iodide of Mercury in very fine powder, 16 grs.; Simple Ointment, 1 oz.: mix. =(1 in 28).

A most effective application for bronchocele, and a good application for warts.

(Same as Brit. 1864; Dub. 1 in 8; Belg. 1 in 25; not in others.)

If applied to the eyelids, should be diluted to ¼ the strength.

HYDRARGYRI IODIDUM VIRIDE.

GREEN IODIDE OF MERCURY.

Hg_2I; **HgI**, eq. 327.

A dull-green powder, which darkens in colour upon exposure to light.

Mercury, 1 oz.; Iodine, 278 grs.; Rectified Spirit, a sufficiency: rub the Iodine and Mercury in a porcelain mortar, occasionally moistening the mixture with a few drops of the spirit, and continue the trituration until metallic globules are no longer visible, and the whole assumes a green colour. The product thus obtained should be dried in a dark room, on filtering-paper, by simple exposure to the air, and preserved in an opaque bottle.

This should be freshly made, as Biniodide of Mercury forms after being kept some time, and becomes evident in minute red specks pervading the mass.

Insoluble in Water and Ether.

(In all the Pharmacopœias; Pr. Hydrargyrum Iodatum.)

Test.—Entirely volatilized at a red-heat. When shaken in a tube with Ether, nothing is dissolved. Is not acted upon by Aniline at a boiling heat, but if Biniodide be present, a magenta colour is produced.

Medicinal Properties.

An irritant poison, similar to calomel in action. In small repeated doses it acts upon the lymphatic and glandular systems, and sometimes causes salivation. Employed as an ointment (1 part to 8 of Lard) for scrofulous and venereal eruptions, and chronic skin diseases.

Dose.—1 to 3 grs., and for children ⅛ to ½ gr.

HYDRARGYRI NITRATIS LIQUOR ACIDUS.

ACID SOLUTION OF NITRATE OF MERCURY.

Nitrate of Mercury, HgO,NO_5; eq. 162; in solution in Nitric Acid.

A colourless and strongly acid solution.

Mercury, 4; Nitric Acid, 5; Distilled Water, 1½: mix the Nitric Acid with the Water in a flask, and dissolve the Mercury in the mixture without the application of heat. Boil gently for fifteen minutes, cool, and preserve the solution in a stoppered bottle.

Test.—Sp. g. 2·246. Does not give any precipitate when a little of it is dropped into Hydrochloric Acid, diluted with twice its volume of water.

(Same as Brit. 1864 and Dub.; Pr. Hydrargyrum Oxydulatum Nitricum Solutum, sp. g. 1·100; Fr. Nitrate de Mercure Liquide; not in others.)

Medicinal Properties.

Caustic. Applied to syphilitic warts, ulcers, tubercles, etc. Used by Recamier in cancerous diseases. As a gargle, 1 or 2 minims to 1 oz. water. As an injection in gonorrhœa, 1 minim to 2 oz. water.

Preparation.

UNGUENTUM HYDRARGYRI NITRATIS *Syn.* Unguentum Citrinum, *Edin.*

Mercury, 4; Nitric Acid, 12; Prepared Lard, 15; Olive Oil, 32: dissolve the Mercury in the Nitric Acid with the aid of a gentle heat; melt the Lard in the Oil by a steam or water bath in a porcelain vessel capable of holding six times the quantity, and while the mixture is hot add the solution of Mercury, also hot, mixing them thoroughly. If the mixture does not froth up, increase the heat till this occurs. (The heat required for this is 170° to 180° F.) =(1 in 15½).

Applied in chronic diseases of the skin as a stimulant and alterative; extremely efficacious in porrigo; in ophthalmic diseases, diluted with 1 or 2 parts of simple ointment, and applied by means of a camel's-hair pencil to the eye-lids.

(Same as Brit. 1864, Edin. Lond. Dub. U. S. Austr. Belg. and Fr. with less Acid; not in others.)

This ointment, which has had a place in the London, Edinburgh, and Dublin Pharmacopœias from their earliest date to the time of the publication of the British Pharmacopœia, was introduced as a substitute for the celebrated Golden Eye Ointment; but till within the last twenty years it had been a most unsatisfactory preparation; it grew hard and crumbly, and its colour changed in a short time after it had been made. We are chiefly indebted to Dr. Duncan for the improved formula which, with some modification, is adopted by the British Pharmacopœia, so that we have now an ointment that remains soft, and retains its beautiful lemon-colour for a long time. Several able pharmaceutists have endeavoured from time to time to point out a better way of preparing it, and various proportions of the ingredients have been employed, as well as the ingredients themselves varied; thus, Butter or Neatsfoot Oil has been used in place of Olive Oil,—but none of the results obtained have equalled the formula here given.

HYDRARGYRI OXIDUM RUBRUM.

RED OXIDE OF MERCURY.

Syn. Hydrargyri Nitrico-Oxidum, *Lond.*

HgO, eq. 108; or **HgO**, eq. 216.

An orange-red powder.

Solubility: insoluble in Water; readily in Hydrochloric Acid.

Mercury, by weight, 8; Nitric Acid, 4½; Water, 2: dissolve half the Mercury in the Acid diluted with the water, evaporate to dryness, and triturate with the remainder of the Mercury until well blended. Heat in a

porcelain capsule, repeatedly stirring, until acid vapours cease to be evolved. Keep in bottles.

Test.—Entirely volatilized at a red-heat, being at the same time decomposed into mercury and oxygen. If this be done in a test-tube, no orange vapours are perceived. Dissolves without residue in Hydrochloric Acid.

Medicinal Properties.

A powerful irritant. Internally, readily excites vomiting and purging; rarely, however, thus used. Chiefly employed as an escharotic, either in powder or ointment.

(Same as Brit. 1864, Edin. Dub. U.S.; Lond. Hydrargyri Nitrico-Oxidum; Austr. Belg. Pr. Hydrargyrum Oxidatum Rubrum; Fr. Oxide Rouge de Mercure.)

Dose.—$\frac{1}{4}$ to 1 gr. in pill, in combination with Opium.

Preparation.

UNGUENTUM.

Red Oxide of Mercury in very fine powder, 62 grs.; Yellow Wax, $\frac{1}{4}$ oz.; Oil of Almonds, $\frac{3}{4}$ oz.: melt the Wax, add the Oil, and mix. =(1 in 8).

(Same as Brit. 1864, Lond. Edin. and Dub.; U.S. 1 in 9; Fr. 1 in 16; Pr. 1 in 50; and Belg. with precipitated oxide 1 in 50; not in Austr.)

In order to make this ointment perfectly smooth, the oxide should be first well rubbed in a warm mortar with a little of the oil, the remainder added gradually.

Mr. Balmanno Squire has shown, that the precipitated oxide is best for the ointment to be used in skin diseases.

1 gr. of the precipitated oxide to 60 grs. of lard the proper strength for the eyelids.

HYDRARGYRI PERCHLORIDUM.

PERCHLORIDE OF MERCURY.

Syn. Hydrargyrum Corrosivum Sublimatum, Brit. 1864; Hydrargyri Bichloridum, Lond.; Hydrargyri Sublimatus Corrosivus, Edin.; Hydrargyri Sublimatum Corrosivum, Dub.; Corrosive Sublimate; HgCl.

Chloride of Mercury, HgCl, eq. 135·5; or $HgCl_2$, eq. 271·0.

In heavy colourless masses of transparent prismatic crystals.

Solubility: in Water, 1 in 15; in Rectified Spirit, 1 in 7; soluble in Ether.

Test.—Entirely soluble in Ether. When heated, it sublimes without decomposition, or leaving any residue.

(Brit. 1864, Lond. Edin. and Dub.; Austr. Belg. and Pr. Hydr. Bichloratum Corros.; Fr. Deutochlorure de Mercure; U.S. Hydr. Chloridum Corros.

Medicinal Properties.

A powerful irritant in very small doses in syphilitic affections. Externally as lotion or ointment in chronic skin diseases, as an injection for chronic mucous discharges, and as a gargle for ulcerated sore-throat.

Dose.—$\frac{1}{16}$ to $\frac{1}{8}$ gr.

Preparations.

LIQUOR.

Corrosive Sublimate, 10 grs.; Chloride of Ammonium, 10 grs.; Distilled Water, 20 oz.: dissolve. Each fluid drachm contains $\frac{1}{16}$ grain. =(1 in 960).

Dose.—30 to 120 minims.

(Same as Lond.)

LOTIO HYDRARGYRI FLAVA.

Corrosive Sublimate, 18 grs.; Lime Water, 10 oz.: mix. =(1 in 266).

INCOMPATIBLES.—Alkalies and their Carbonates, Lime-water, Tartar Emetic, Nitrate of Silver, Acetate of Lead, Albumen, Iodide of Potassium, Soaps, Decoction of Bark.

ANTIDOTES.—In case of poisoning by Corrosive Sublimate, Albumen, White of Egg, given in moderate quantity, lest an excess of it should redissolve the compound. 4 grs. of Corrosive Sublimate require the white of one egg; the yolk is equally effective. Wheaten Flour, Milk, and Protochloride of Tin have been recommended.

Not Officinal.

COLLYRIUM HYDRARGYRI.—Corrosive Sublimate, 1 gr.; Water, 6 to 8 oz.: mix.

UNGUENTUM HYDRARGYRI BICHLORIDI (Guy's Hospital).—Corrosive Sublimate, 1; Simple Ointment, 145: mix. For Porrigo.

HYDRARGYRI SUBCHLORIDUM.

SUBCHLORIDE OF MERCURY.

Syn. CALOMELAS, 1864, Edin. Dub.; HYDRARGYRI CHLORIDUM, Lond.; CALOMEL.

Hg_2Cl; or **HgCl**, eq. 235·5.

A dull-white, heavy, and nearly tasteless powder.

Insoluble in Water, Rectified Spirit, or Ether.

Test.—Entirely volatilized by a sufficient heat—indicating absence of impurities. Warm Ether, which has been shaken with it in a bottle, leaves on evaporation no residue—indicating absence of Corrosive Sublimate.

Medicinal Properties.

Alterative, cholagogue, purgative, and antiphlogistic.

As an alterative it is used in syphilitic affections, chronic skin diseases, and scrofula in adults.

As a cholagogue in chronic hepatitis and jaundice.

As a purgative in bilious headache, hepatic dropsy, melæna, inflammation of the brain, and apoplexy.

As an antiphlogistic, 2 grs. combined with $\frac{1}{4}$ gr. opium, every four hours in inflammation of the serous membranes: *e.g.* iritis, pleurisy, and peritonitis.

For children, the absence of taste renders it convenient.

Its *local uses* are numerous, as in snuff, or as a gargle in venereal sore-throat, as an injection with or without lime-water, in blenorrhœa, and in fumigation. In a wide range of skin affections, it is invaluable as an ointment.

Dose.—As an alterative, $\frac{1}{2}$ to 1 gr. three times a day; as a purgative and cholagogue, 2 to 8 grs.

(In all the Pharmacopœias; Lond. U. S. Hydrargyri Chloridum Mite; Pr. Hydrargyrum Chloratum Mite.)

I find the best form for making Calomel into pills as follows: 2 of Calomel, 1 of soft Manna, 1 of compound Tragacanth powder. When made with mucilage they get very hard by keeping, and if made with conserve are apt to become moist.

Preparations.

LOTIO NIGRA.

Calomel, 3 grs.; Lime Water, 1 oz.: mix.

PILULA COMPOSITA.

Calomel, 1; Sulphurated Antimony, 1; Guaiac Resin in powder, 2; Castor Oil, 1: mix. =(1 in 5).

(Same as Lond. Edin. and Dub.; Belg. Pil. Alterans Plummeri, 1 in 3; U.S. Pil. Antimonii Comp. 1 in 6; not in others.)

Dose.—5 to 10 grs. as an alterative.

UNGUENTUM.

Calomel, 1; prepared Lard, $5\frac{1}{2}$: mix. =(1 in $6\frac{1}{2}$).

(Brit. 1864.)

HYDRARGYRI SULPHAS.

HgO,SO_3, eq. 148; or $HgSO_4$, eq. 296.

A white heavy crystalline powder, rendered yellow by affusion with water.

Used to prepare Calomel and Corrosive Sublimate.

HYDRARGYRUM AMMONIATUM.

AMMONIATED MERCURY.

NH_2Hg_2,Cl; or NH_2HgCl, eq. 251·5.

An opaque white powder.

Solubility: soluble in Hydrochloric Acid. Insoluble in Water, Alcohol, and Ether.

Test.—Entirely volatilized at a red-heat. Digested with Caustic Potash, it evolves Ammonia.

(In all the Pharmacopœias except Fr. Lond. Dub. Hydrargyri Ammonio-Chloridum; Edin. Hydrargyri Præcipitatum Album; Ph. L. 1788, Calx Hydrargyri Alba.)

Medicinal Properties.

Never given internally. Used in the form of ointment as a stimulating application for chronic skin diseases, as porrigo, impetigo, herpes, and sometimes scabies. The ointment is used for pediculi, but the powder can be used alone or mixed with rose-water, and the unpleasantness of greasing the linen avoided.

Preparation.

UNGUENTUM HYDRARGYRI AMMONIATI.

Ammoniated Mercury, 62 grs.; Simple Ointment, 1 oz.: mix. =(1 in 8).

(Same as Brit. 1864, Lond. Ung. Hydrargyri Ammonio-Chloridi, and Edin. Ung. Præcipitati Albi; U.S. 1 in 13; Pr. Ung. Hydr. Amidato-bichlorata, 1 in 10; not in others.)

HYDRARGYRUM CUM CRETA.

Mercury, 1; Prepared Chalk, 2: triturate till the globules disappear. =(1 in 3).

By heat, part passes off in vapour; what remains corresponds to chalk in its chemical characters.

(Same as Brit. 1864 and Dub.; Lond. Edin. Fr. and U. S. 3 and 5; not in others.)

Dose.—3 to 8 grs.

Best given by itself, or with rhubarb or other powder, as when rubbed with hard extract to form a pill, the Mercury sometimes separates in globules.

INCOMPATIBLES.—Acids and acidulous salts.

HYOSCYAMI FOLIA.

HYOSCYAMUS LEAVES.

The fresh leaves and small branches of the *Hyoscyamus niger*, or Henbane, an indigenous biennial plant; collected when about two-thirds of its flowers are expanded. Also the leaves ONLY, carefully dried.

Its properties are completely extracted by Alcohol. The leaves yield by destructive distillation a very poisonous oil. The plant is said to contain a crystalline alkaloid, which is rarely obtained pure.

The biennial plant in the first year presents only a tuft of leaves; these die, and leave not a trace of the plant in the winter; they spring again in April and produce a stem, the leaves and the branches of this are used in medicine.

Medicinal Properties.

Narcotic. Similar in action to Belladonna and Stramonium, but milder. Used as a sedative in excited states of the nervous system when Opium, from its constipating properties, is not advisable. It is also employed to diminish pain and allay irritation of the bladder, and to prevent the griping of purgative medicines. The fresh leaves are sometimes used as a cataplasm, or as a fomentation to allay pain in ulcers and tumours, and in gouty and rheumatic swellings. The juice of the plant dilates the pupil of the eye.

(Same as Brit. 1864; Lond. Edin. Dub. and Pr. Leaves; Austr. Belg. and U. S. Leaves and Seeds; Fr. Jusquiame, Leaves and Seeds.)

Preparations.

EXTRACTUM.

The expressed juice of the leaves and young branches treated as directed in Extract of Belladonna, and evaporated to an extract at a temperature not exceeding 140° F.

100 produce 50 juice = 5 Extract.
100 leaves, dried, weigh 15½.

(Same as Brit. 1864, Lond. Edin. and Dub.; Belg. reduced to powder; Fr. clarified juice*; Pr. Austr. with recent plant and Rectified Spirit to get rid of the Albumen and Chlorophyll, and the clear juice evaporated to an extract)

Note.—* Extract prepared from clear juice is twice the strength.

Dose.—3 to 6 grs.

TINCTURA.

Hyoscyamus leaves, dried and bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, pack in a percolator, and when it has drained pour on the remaining spirit, and when it ceases to drop, press, and wash the marc with spirit to make up 8. =(1 in 8).

(Same as Brit. 1864, Lond. Edin. and Dub.; (Fr. 1 in 5, and with fresh Leaves and Spirit, equal weights; Belg. 1 in 5 by weight), also with fresh Leaves; U. S. 1 in 7¾; not in others.)

Dose.—15 to 60 minims; 4 drms. have been given in severe insomnolence.

Not Officinal.

SUPPOSITORIA HYOSCYAMI.—Extract, 5 grs.; Cacao Butter, 6 grs.; Lard, 4 grs.; Wax, 1 gr.: mix for one suppository.

INCOMPATIBLES.—Vegetable acids, Nitrate of Silver, Acetate of Lead, Liquor Potassæ or Sodæ.

ANTIDOTES.—The stomach pump, emetics, external and internal stimulants, Lemon Juice. According to the statement of some eminent writers, a large dose of Hyoscyamus may be taken with impunity.

INFUSA.

INFUSIONS.

Infusions, though generally made with boiling water, are in some cases ordered to be made at a lower temperature, as in that of Infusum Calumbæ, the starch of which would be dissolved by boiling water, and would thus be objectionable to prescribe with Iodine. The mucilage and vegetable albumen present is, however, dissolved by cold water, and these render the infusion liable to change.

The Infusion Pot which I invented, and placed in the Exhibition of 1851, answers well for Infusions if proper sizes are used for the quantities ordered, so that the ingredients are held by the perforated basin in the upper part of the fluid and *under the surface*. The impregnated fluid becoming of greater density falls to the bottom, thus exposing the ingredients constantly to the continued action of fresh unimpregnated fluid until the action ceases, and the soluble matter most effectually extracted. *When hot infusions are made, boiling water should be first poured into the pot, to thoroughly warm it; this being thrown out, the ingredients are put into the colander, and the requisite quantity of boiling water poured upon them. The new pots have the directions for use, enamelled upon them.*

Infusions are very apt to change in hot weather, and several means have been proposed to preserve them. Small bottles filled to the brim with recently-made infusion, may be placed in a boiler with hay and water, and heated to the boiling-point, then tied over with a bladder whilst hot. Infusions thus treated are preserved for several months. Infusion of Senna, which would change in twelve hours in hot weather, will keep for several days perfectly good if one grain of Nitre be dissolved in each ounce of the Infusion.

The following Infusions contained in former Pharmacopœias are omitted in the British;—Infusum Armoraciæ Comp., Inf. Cinchonæ Spissatum (*see* EXTRACTUM LIQUIDUM), Inf. Cinchonæ Pallidæ, Inf. Cinchonæ Pallidæ Spissatum, Inf. Juniperi, Inf. Menthæ Viridis, Inf. Pareiræ, Inf. Simarubæ.

The Infusions introduced into the British Pharmacopœia are, Inf. Dulcamaræ and Inf. Uvæ Ursi.

The following are the Infusions of the British Pharmacopœia.

It has been thought desirable, for the convenience of the dispenser, to add a table of the ingredients and time required. The full formulæ, however, for these Infusions will be found under the names of the substances from which they are prepared.

Boiling Distilled Water is to be used, unless otherwise stated.

INFUSUM ANTHEMIDIS	½ oz.		Water	10 oz.	Infus. ¼ hour and strain.
INF. AURANTII (peel cut small)	½			10	¼
INF. AURANTII COMP.					
Orange Peel, cut small	¼				
Fresh Lemon Peel, cut small	60 grs.			10	¼
Cloves	30 grs.				
INF. BUCHU (leaves bruised)	½ oz.			10	1
INF. CALUMBÆ (cut small)	½		cold	10	1
INF. CARYOPHYLLI (bruised)	¼			10	½
INF. CASCARILLÆ (coarse powder)	1			10	1
INF. CATECHU (coarse powder)	160 grs.				
Cinnamon (bruised)	30			10	½
INF. CHIRATÆ (cut small)	¼ oz.		120°	10	½
INF. CINCHONÆ FLAVÆ (coarse powder)	½			10	2
INF. CUSPARIÆ (coarse powder)	½		120°	10	2
INF. CUSSO (coarse powder)	¼			4	¼ not strained.
INF. DIGITALIS (dried leaves)	30 grs.			10	1
INF. DULCAMARÆ (bruised)	1 oz.			10	1
INF. ERGOTÆ (coarse powder)	¼			10	½
INF. GENTIANÆ COMP.					
Gentian (sliced)	60 grs.				
Bitter Orange Peel (cut small)	60 grs.			10	1
Fresh Lemon Peel (cut small)	¼ oz.				
INF. KRAMERIÆ (bruised)	½			10	1
INF. LINI	Linseed 160 grs.				
Fresh Liquorice Root	60 grs.			10	4
INF. LUPULI	½ oz.			10	2
INF. MATICÆ (cut small)	½			10	½
INF. QUASSIÆ (chips)	60 grs.		cold	10	½
INF. RHEI (sliced)	½ oz.			10	1
INF. ROSÆ ACIDUM (broken petals)	¼				
Dil. Sulph. Acid	1 drm.			10	½
INF. SENEGÆ (bruised)	½ oz.			10	1
INF. SENNÆ (Senna)	1 oz.				
Ginger (sliced)	30 grs.			10	1
INF. SERPENTARIÆ (bruised)	¼ oz.			10	2
INF. UVÆ URSI (bruised)	½			10	2
INF. VALERIANÆ (bruised)	120 grs.			10	1

IODUM.

IODINE.

I, or **I**; eq. 127.

A non-metallic element, obtained principally from the ashes of sea-weeds, in the western islands of Scotland and Ireland. Sublimed in laminar crystals of a dark colour and metallic lustre, and of peculiar odour.

Solubility: sparingly in Water, 1 in 7000; in Alcohol, 1 in 12; in Ether, and in a solution of Iodide of Potassium, or Chloride of Sodium.

Test.—Entirely soluble in Ether. It sublimes without leaving any residue, and the portion which first comes over does not include any slender colourless prisms, emitting a pungent odour (Cyanide of Iodine). 12·7 grains dissolved in 1 ounce of Water containing 15 grains of Iodide of Potassium, require for complete discoloration 1000 grain-measures of the volumetric solution of Hyposulphite of Soda; *i. e.* to change the whole of the equivalent 12·7 grains of Iodine into colourless Iodide of Sodium and Tetrathionate of Soda.

(In all the Pharmacopœias.)

Medicinal Properties.

It acts specially as a stimulant to the entire lymphatic system, causing absorption, promoting elimination by the kidneys, acting as an antidote to certain blood poisons, organic and inorganic, as syphilis and lead-poisoning. Also in chronic inflammation, to promote absorption and elimination in dropsies and chronic rheumatism. Most efficacious in glandular enlargements and morbid growths, as in bronchocele, scrofulous glands of the neck and abdomen, as an alterative in obstinate mucous discharges; caution, however, being used, as it may occasion wasting in healthy glands, such as the mammæ and testes. Externally, in chronic and skin diseases, and over enlarged and indurated parts and diseased joints, to cause absorption. A few drops of the tincture in half a pint of hot water may be inhaled in some forms of chronic bronchitis and phthisis.

Dose.—Of free Iodine, ½ gr., gradually increasing.

Best administered in the form of Tincture, largely diluted with Water.

Contained in Pilula Ferri Iodidi and Syrupus Ferri Iodidi.

The Iodides of Cadmium, Iron, Mercury, Potassium, and Sulphur are officinal; those of Arsenic and Zinc are not officinal.

Preparations.

LINIMENTUM.

Iodine, 5; Iodide of Potassium, 2; Camphor, 1; Rectified Spirit, 40: dissolve. =(1 of Iodine in 8).

(Half the strength of Brit. 1864.)

Proper strength to paint upon bursæ and enlarged glands.

LIQUOR.

Iodine, 20 grs.; Iodide of Potassium, 30 grs.; Distilled Water, 1 oz. =(1 of Iodine in 24).

A new preparation.

TINCTURA.

Iodine, ½; Iodide of Potassium, ¼; Rectified Spirit, 20: dissolve. =(1 of Iodine in 40).

Dose.—5 to 20 minims.

(Same quantity of Iodine as Brit. 1864, Lond. Dub. and U. S. Comp.; but with only one-fourth of Iodide of Potassium. The following without the Iodide of Potassium:—Edin. and U. S. 1 in 17 (Austr. 1 in 17, Fr. 1 in 12, Pr. 1 in 10 by weight); not in others.)

INCOMPATIBLES.—Ammonia, Metallic Salts, Mineral Acids, Vegetable Alkaloids.

ANTIDOTES.—Emetics aided by demulcent drinks, starch, flour, etc., diffused in water.

UNGUENTUM.

Iodine, 32 grs.; Iodide of Potassium, 32 grs.; Proof Spirit, 1 drm.; rub together and add Prepared Lard, 2 oz. =(1 in 31).

(Brit. 1864, Compositum; same quantity of Iodine as Lond. Edin. Dub. and U. S., but with only half the quantity of Iodide of Potassium; Belg. 1 in 25, without Iodide of Potassium; Fr. Pommade d'iodure de Potassium, Iodurée, Iodine 1, Iodide of Potassium 5, Lard 40; not in others.)

VAPOR. INHALATION OF IODINE.

Tincture of Iodine, 1 drm.; Water, 1 oz.: mix in a suitable apparatus, and having applied a gentle heat, let the vapour that rises be inhaled.

A new preparation.

Not Officinal.

GARGARISMA IODI (St. Thomas's Hospital).—Tincture of Iodine, 2 drms.; Water, 5 oz.: mix. (In ulceration of the tonsils.) =(1 in 20).

INHALATIO IODI CUM CONIO.—½ drm. to 1 drm. of Succus Conii being added to the above.

IODOFORM.—A yellow crystalline substance given to relieve cancer and abate the progress of the disease.

Dose.—5 grs. in a mixture twice a day; the Iodoform should be finely powdered, and at least 20 times its weight of mucilage employed to make it miscible with water.

LIQ. AMMONIÆ IODIDI (Dr. Simpson).—Liq. Ammon. Fortiss., 2 oz.; Iodine, 10 grs.; Iodide of Potassium, 20 grs.; Rectified Spirit, 1 oz.: dissolve.

IPECACUANHA.

IPECACUAN.

The dried root of the *Cephaëlis Ipecacuanha*, from Brazil. The active principle resides in the bark, the inner or woody part possessing scarcely any of its virtues.

Ipecacuanha contains an alkaloid, *Emetina* ($C_{35}H_{25}NO_9$), separable as a whitish amorphous powder.

Medicinal Properties.

Emetic in large doses. In small doses it becomes absorbed and acts upon the different mucous surfaces, especially of the respiratory organs, and is therefore expectorant. It is diaphoretic and laxative; also sedative to the vascular system. Given in agues, to prevent the paroxysm.

(In all the Pharmacopœias.)

Dose.—In powder as an emetic, 15 to 30 grs.; as an expectorant, etc., ½ to 2 grs.
Prescribed in ¼ to 1 gr. doses as an auxiliary in alterative pills.
Contained in Pil. Conii Comp., Trochisci Morphiæ et Ipecacuanhæ.

Preparations.

PILULA IPECACUANHÆ CUM SCILLÆ.

Compound powder of Ipecacuanha, 3; Squill, in powder, 1; Ammoniacum, in powder, 1; Treacle, q. s. =(3 Dover's Powder in 6½).

(Same as Lond.)

Dose.—5 to 10 grs.

PULVIS IPECACUANHÆ COMPOSITUS. *Syn.* PULVIS IPECACUANHÆ CUM OPIO.

Ipecacuan, in powder, 1; Opium, in powder, 1; Sulphate of Potash, 8: mix. =(1 Opium, 1 Ipecac. in 10.)

Dose.—5 to 10 grs.

(In all the Pharmacopœias, and is the well-known Dover's Powder, Pr. Pulvis Ipecacuanhæ Opiatus. The original Powder of Dr. Dover was prepared by fusing 4 parts of Nitrate of Potash with 4 of Sulphate of Potash together, and reducing the product to fine powder; to this was added 1 of Ipecacuanha, 1 of Opium, and 1 of Liquorice. The French Codex adopts this formula for Poudre de Dower, using, however, the powdered Extract of Opium instead of Opium itself, which doubles the strength.)

An admirable anodyne diaphoretic; it is also most useful in dysentery and diarrhœa: in the latter case, it is sometimes combined with calomel.

TROCHISCI IPECACUANHÆ.

¼ gr. in each lozenge.

(Fr. Tablettes d'Ipécac., ⅐ of a gr. each.)

A new preparation.

Dose.—1 to 3 lozenges.

TROCHISCI IPECACUANHÆ ET MORPHIÆ.

$\frac{1}{12}$ gr. Ipecacuanha, $\frac{1}{36}$ gr. Hydrochlor. of Morphia, in each lozenge.

(Same as Brit. 1864.)

Dose.—1 to 6 lozenges.

VINUM.

Ipecacuanha, bruised, 1: Sherry, 20: macerate seven days, shaking occasionally, strain, and make up 20. =(1 in 20).

(Same as Brit. 1864 and Fr.; Lond. Edin. Dub. and U. S. 1 in 16; Belg. 1 in 16 with Malaga; not in others.)

Dose.—As an expectorant, etc., 5 to 40 minims; as an emetic, 3 to 6 drms.

INCOMPATIBLES.—Salts of Lead, Mercury, vegetable acids, astringent infusions.

Not Officinal.

SYRUPUS IPECACUANHÆ (Pr.).—Bruised Ipecacuanha, 3; Rectified Spirit, 10 Water, 84: digest twenty-four hours, and filter 88; add 144 of Sugar, and boil to a syrup.

Dose.—15 to 60 minims.

JALAPA.

JALAP.

The dried tubercles of the *Exogonium Purga;* imported from Mexico.

Medicinal Properties.

A brisk cathartic, operating sometimes painfully, producing copious watery discharges. From its hydragogic powers, it is especially applicable to dropsy, when it is usually combined with Bitartrate of Potash or Calomel.

(In all the Pharmacopœias.)

Dose.—10 to 30 grains.

Contained in Pulvis Scammonii Compositus.

Preparations.

EXTRACTUM.

Jalap, in coarse powder, 1; Rectified Spirit, 5; Distilled Water, 10: macerate the Jalap in the spirit for seven days, press out the tincture, then filter and distil off the spirit, leaving a soft extract: again macerate the residual Jalap in the water for four hours, express, strain through flannel, and evaporate by a water-bath to a soft extract; mix the two extracts and evaporate at a temperature not exceeding 140° F., to a proper consistence for forming pills.

100 lb. of Jalap yield 50 lb. extract.

In the former London Pharmacopœias, the Jalap was first digested in Rectified Spirit, then boiled in Water, the tincture and decoction strained separately and mixed, then evaporated to an extract, and a most heterogeneous extract was the result of the process. The British Pharmacopœia directs the root to be digested with the spirit and then with cold water; it is then free from these objections.

Dose.—5 to 15 grs.

(Same as Brit. 1864; Lond. and U. S.; not in others.)

PULVIS COMPOSITUS.

Jalap, in powder, 5; Acid Tartrate of Potash, 9; Ginger, in powder, 1: mix. =(1 in 3).

Dose.—10 to 20 gr.; Brit. Ph. 20 to 60 grs.

(Same strength as Brit. 1864, Lond. Edin. Dub. and U. S.; not in others.)

RESINA.

A Resin obtained from Jalap by means of Rectified Spirit.

Easily soluble in Rectified Spirit, but only partially so in Ether, and insoluble in Oil of Turpentine.

(Same as Brit. 1864, U. S. and Fr.; not in Dub. or in other Pharmacopœias.)

Dose.—2 to 5 grs.

Jalap yields 18 or 20 per cent. of resin.

Jalapine, so largely prescribed, is nothing more than this Resin discolorized by Animal Charcoal; it may be given in the same dose, and, being in fine division, is less likely to irritate the bowels.

TINCTURA.

Jalap, in coarse powder, 1; Proof Spirit, 8; macerate forty-eight hours in 6 of the spirit, agitating occasionally, pack in a percolator, and when the fluid ceases to pass, pour on the remaining spirit, press, filter, and add spirit to make 8. =(1 in 8).

(Brit. 1864 and Lond. 1 in 8; Edin. and U. S. 1 in 5; Dub. 1 in 6; (Fr. 1 and 5; Belg. 1 in 5 by weight;) not in others.)

Dose.—½ to 2 drms.

JUNIPERI OLEUM.

ENGLISH OIL OF JUNIPER.

The Oil distilled in Britain from the unripe fruit of the *Juniperus communis.*

Sp. g. 0·855. Of very superior flavour to the imported Oil.

Medicinal Properties.

Stimulant, carminative, and diuretic, the latter property constituting its chief medicinal value. Used in debilitated dropsical cases, either alone or combined with other diuretics.

(In all the Pharmacopœias except Belg. and Fr.)

Dose.—1 to 3 minims.

Preparation.

SPIRITUS JUNIPERI.

English Oil of Juniper, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

Contains about 20 times as much Oil of Juniper as Spiritus Juniperi, Lond.

(Brit. 1864, 1 in 10; Lond. Edin. Dub. U. S. and Belg. were compound spirits; Austr. and Pr. simple, but very weak.)

Dose.—30 to 60 minims.

KAMALA.

KAMALA.

A fine, granular, mobile, orange-red powder, consisting of minute glands, adhering to the capsules of the *Rottlera tinctoria;* imported from India.

Solubility: scarcely mixing with water, but for the most part soluble in, and forming a red-coloured solution with Alcohol and Ether.

Test.—Ether dissolves most of it, the residue consisting principally of tufted hairs; should be free from sand and earthy impurities.

Medicinal Properties.

Purgative. Successfully given in tænia. Preferred to Kousso and Turpentine.

(Brit. 1864 and U. S.; but not in other Pharmacopœias.)

Dose.—60 to 120 grs. of the powder suspended in Gruel, Mucilage, Treacle, or Syrup, will of itself expel the worm. A purgative should follow.

Not Officinal.

TINCTURA.—Kamala, 1; Proof Spirit, 5: macerate seven days and strain.

Dose.—1 to 2 drms.

KINO.

KINO.

The juice obtained, by incision, from the trunk of the *Pterocarpus Marsupium*, inspissated; imported from Malabar.

In small, angular, brittle, glistening, reddish-black fragments, translucent, and ruby-red on the edges, inodorous, astringent.

Solubility: of 100 grains Tellicherry Kino, only 88 grains are dissolved by cold Water, and 35 grains of Isinglass will precipitate the whole of the astringent matter from the solution. More soluble than Pale Catechu in water, and the solution is more astringent.

Medicinal Properties.

A powerful astringent. Employed in obstinate diarrhœa and pyrosis. Also used for intermittents, with Cinchona. Externally, as a styptic, and in powder to indolent and flabby ulcers. Best given in diluted Alcohol.

(In all the Pharmacopœias.)

Dose.—10 to 30 grs.

Contained in Pulvis Catechu Composita.

INCOMPATIBLES.—Mineral Acids, Alkalies and Carbonates, Metallic Salts and Gelatine.

Preparations.

PULVIS KINO COMPOSITUS. *Syn.* PULV. KINO CUM OPIO (Brit. 1864).

Kino, in powder, 15; Opium, in powder, 1; Cinnamon, in powder, 4. =(1 Opium in 20).

20 grains contain 1 grain Opium, in powder.

Dose.—5 grs. and upwards, according to the quantity of Opium required.

(Same as Brit. 1864 and Lond.; not in others.)

TINCTURA.

Kino, in powder, 1: Rectified Spirit, 10: macerate seven days, filter, and make up 10. =(1 in 10).

(Same as Brit. 1864, Lond. Edin. and U.S. (Belg. 1 in 5; Fr. 1 and 5 by weight); not in others.)

Dose.—½ to 2 drms.

KOUSSO or KUSSO.—*See* CUSSO, Page 97.

KRAMERIÆ RADIX.

RHATANY ROOT.

The dried root of the *Krameria triandra;* imported from Peru.

Medicinal Properties.

A powerful astringent; tonic. Used in chronic diarrhœa, passive hæmorrhages and mucous discharges, as menorrhagia, leucorrhœa: and generally

where Kino and Catechu are beneficial. As a gargle in relaxed sore-throat. Locally in prolapsus ani or fistula ani.

(In all the Pharmacopœias.)

Dose.—In powder, 20 to 60 grs.

Contained in Pulvis Catechu Compositus.

INCOMPATIBLES.—Alkalies, Lime Water, Salts of Iron and Lead, Gelatine.

Preparations.

EXTRACTUM.

Rhatany, in coarse powder, 1; Cold Distilled Water, 15: macerate twenty-four hours in 2 of the water, then percolate the whole. Evaporate, by a water-bath, to dryness.

Dose.—5 to 20 grs.

(Same as Brit. 1864, Edin. U. S. Belg. Fr. Pr.; but Austr. with boiling water; not in others.)

INFUSUM.

Rhatany, bruised, 1; boiling Distilled Water, 20: infuse one hour and strain. =(1 in 20).

(Same as Brit. 1864, Lond. and Dub.; U. S. 1 in 16; Fr. Tisane 1 in 50; not in others.)

Dose.—1 to 2 oz.

TINCTURA.

Rhatany, bruised, 1; Proof Spirit, 8: macerate forty-eight hours in 6 of the spirit, agitating occasionally, pack in a percolator; when it ceases to drop, pour on the remaining spirit, and wash the marc with spirit to make up 8. =(1 in 8).

(Same as Brit. 1864; Dub. and U. S. 1 in 5 (Aust. Belg. Fr. and Pr. 1 in 5 by weight); not in others. Fr. has also Brit. Ph. formula.)

Dose.—1 to 2 drms.

Excellent for the teeth and gums when either spongy or inflamed.

LAC.

Fresh milk from the cow.

Used only for preparing Mistura Scammonii.

LACTUCA.

LETTUCE.

The leaves and flowering tops of the wild indigenous plant *Lactuca virosa*.

Medicinal Properties.

Sedative, narcotic; said also to be gently laxative, powerfully diuretic, and somewhat diaphoretic. Employed in dropsy and in cases of visceral obstruction. Generally combined with Squill, Digitalis, or other diuretics.

Preparations.

EXTRACTUM.

The inspissated juice evaporated to a pilular consistence, according to the directions given for Extractum Belladonnæ.

Dose.—5 to 10 grs.

(Same as Austr. Belg. and Fr. (Thridace; Ext. Laitue); not in others.)

100 lb. of the plant yield 52 lb. juice = 5¼ lb. or 84 oz. of extract.

Not Officinal.

Eau Distillee de Laitue.—From Lettuce flowers, 1 in 1. Fr. Ph.

Succus.—The expressed juice, 3; Rectified Spirit, 1: mix.

Dose.—1 to 2 drms.

Lactucarium.—The juice from the incised flower-stalk, collected and dried.

(Dub. Edin. and U. S.; not in Lond.)

Dose.—3 to 8 grs.

Tinctura Lactucarii.—Lactucarium, 1; Proof Spirit, 10: digest seven days and filter.

Dose.—30 to 60 minims.

These preparations are highly prized by some practitioners for their sedative qualities, whilst others aver that they are almost inert. The Author believes in their virtues.

LAUROCERASI FOLIA.

CHERRY-LAUREL LEAVES.

The fresh leaves of the *Prunus Laurocerasus*, common or Cherry-laurel.

Preparation.

AQUA.

Fresh leaves of common Laurel, 16; Water, 50; chop the leaves, crush them in a mortar, and macerate them in the water twenty-four hours; distil 20 of the liquid, shake the product, filter through paper, and preserve in a stoppered bottle. = (1 in 1¼).

(Same strength as Brit. 1864, Edin. Dub. (Austr. Belg. Fr. viz. in every 1000 minims there should be ½ a minim of Anhydrous Hydrocyanic Acid;) not in others.)

Hydrocyanic Acid of the former edition is omitted in the new Prussian Ph.; and Aqua Amygdalarum Amararum is now the representative, which contains one part of Anhydrous Prussic Acid in 720 parts; this again is diluted with twenty-three times its bulk of water to form the Aqua Cerasorum Amygdalata, it then contains 1 of anhydrous Prussic Acid in 16560.

In case of overdose, the antidotes should be as directed under Acidum Hydrocyanicum.

The Edinburgh preparation was coloured with Compound Spirit of Lavender.

Medicinal Properties.

Sedative. Similar to Hydrocyanic Acid.

Dose.—5 to 30 minims.

Incompatibles.—Same as Hydrocyanic Acid.

LAVANDULÆ OLEUM.

ENGLISH OIL OF LAVENDER.

The Oil distilled in Britain from the flowers of *Lavandula vera*.

Medicinal Properties.

An aromatic stimulant and carminative. Useful in hysteria, hypochondriasis, and other nervous affections, also in flatulence and colic. Rarely given in a crude state. Used as an adjuvant to other medicines.

Contained in Linimentum Camphoræ Compositum.

Dose.—3 to 6 minims.

Preparations.

SPIRITUS LAVANDULÆ.

English Oil of Lavender, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

(⅕ of the strength of Brit. 1864; but stronger than Edin. Pr.; Fr. Alcoolat de Lavande, and U.S. fresh flowers; Austr. dried flowers; not in others.)

Dose.—30 to 60 minims.

TINCTURA LAVANDULÆ COMPOSITA. *Syn.* Sp. Lavand. Comp., Edin.

English Oil of Lavender, 90 minims; English Oil of Rosemary, 10 minims; Cinnamon, bruised, 150 grs.; Nutmeg, bruised, 150 grs.; Red Sandal-wood, 300 grs.; Rectified Spirit, 40 oz.: macerate the Cinnamon, Nutmeg, and Red Sandal-wood in the spirit for seven days, then press out and strain; dissolve the Oils in the strained tincture and add sufficient Rectified Spirit to make 40 oz.

Or Spirit of Lavender, 30; Spirit of Rosemary, 3⅓; Cinnamon, 1; Nutmeg, 1; Red Sandars, 2; Rectified Spirit, 128.

(Same as Brit. 1864 and Fr.; similar to Lond. Edin. Dub. and U.S.; differs much from the Belg. Alcoholetum Compositum; not in others.)

Dose.—½ to 2 drms.

Added to colour Liq. Arsenicalis.

LIMON.

LEMON.

The ripe fruit of the *Citrus Limonum*, imported from Southern Europe.

LIMONIS CORTEX.

LEMON PEEL.

The fresh outer part of the rind.

Medicinal Properties.

A warm aromatic. Added to stomachic tinctures and infusions. Particularly applicable to dyspepsia.

(Brit. 1864, Lond. Edin. Fr. Pr. U.S.; not in others.)

Contained in Inf. Aurant. Comp. and Inf. Gentian. Comp.

Preparation.

OLEUM LIMONIS.

The Oil expressed or distilled from fresh peel; imported chiefly from Sicily.

Sp. g. 0·851 as ordinarily procured. If three-fifths only are distilled, its sp. g. is reduced to 0·847.

Stimulant and carminative. Chiefly used, however, to impart flavour to other medicines. Externally, stimulant and rubefacient.

(Brit. 1864, Lond. Edin. U. S.; not in others.)

Its flavour and aroma suffer much from keeping; it should always be procured as fresh as possible.

Dose.—1 to 4 minims.

Contained in Lin. Potass. Iod. cum Sapone, and Spiritus Ammoniæ Aromaticus.

SYRUPUS LIMONIS.

Fresh Lemon Peel, 2; Lemon Juice, strained, 20; Refined Sugar, 36. Heat the Lemon Juice to the boiling-point, and having put it into a covered vessel with the Lemon Peel, let them stand until they are cold, then filter and dissolve the sugar in the filtered liquid with a gentle heat. The product should weigh 56 and measure 41.

Sp. g. 1·340. =(2 Peel and 20 Juice in 41).

(Same as Brit. 1864, Lond. Edin. U. S. and Austr.; Fr. made with Alcoolature; not in others.)

Dose.—1 to 2 drms.

TINCTURA LIMONIS.

Fresh Lemon Peel, sliced thin, 1; Proof Spirit, 8: macerate for seven days in a closed vessel with occasional agitation, strain, press, filter, and make up with spirit to 8. =(1 in 8).

(Same as Brit. 1864; Lond. 1 in nearly 11; Dub. 1 in 4; Fr. Alcoolature, 1 Recent Peel to 2 of Alcohol; not in others.)

Dose.—½ to 2 drms.

INCOMPATIBLES: Mineral Acids and Lime Water.

LIMONIS SUCCUS.

LEMON JUICE.

The expressed juice of the ripe fruit.

To preserve the juice, it may be heated to 150°, filtered, and set aside in bottles completely filled. If this process be performed during the winter, it is said that the juice may be kept perfectly good for twelve months. Mr. Schweitzer states that if one-tenth part of Alcohol be added to fresh Lemon Juice, it prevents decomposition, and the juice is rendered fit for exportation.

Average quantity of Citric Acid in a fluid ounce is 32·5 grs., and the average sp. g. is 1·039.

Medicinal Properties.

Refrigerant; when diluted, a refreshing beverage in febrile and inflammatory affections.

In acute rheumatism ½ to 1 pint daily. Combined with Opium and Cinchona. A local application in pruritus scroti, and uterine hæmorrhage.

Dose.—½ to 4 oz.

Contained in Syrupus Limonis.

Preparation.

ACIDUM CITRICUM.—*See* ACIDUM CITRICUM.

LINIMENTA.

LINIMENTS.

This group has received some valuable additions in the British Pharmacopœia. The Pharmacopœia Committee, in order to guard against mistakes, have called *strong Tinctures* that are employed for external use by the name of *Liniments*, so that all the Tinctures may now be considered for *internal* use only.

The Linimentum Æruginis, Lond., Ammoniæ Compositum, Edin., Ammoniæ Sesquicarbonatis, Lond., were seldom used, and they, together with Linimentum Simplex, Edin., are omitted. Linimentum Cantharidis, made with oil, Dub., is substituted by an ethereal solution called Liquor Epispasticus, which blisters readily.

The following new Liniments are given in the British Pharmacopœia:—Linimentum Aconiti, Linimentum Belladonnæ, Linimentum Iodi, Linimentum Terebinthinæ Aceticum, Linimentum Potassii Iodidi cum Sapone.

The following are the Liniments of the British Pharmacopœia, the formulæ of which will be found under the names of the substances from which they are prepared:—

		Proportion of the active ingredient to the whole.
Page 16.	LINIMENTUM ACONITI	1 in 1.
29.	LINIMENTUM AMMONIÆ	1 in 4.
49.	LINIMENTUM BELLADONNÆ	1 in 1.
58.	LINIMENTUM CALCIS	1 in 2.
62.	LINIMENTUM CAMPHORÆ	1 in 5.
62.	LINIMENTUM CAMPHORÆ COMP. Strong Ammonia. (Two-thirds stronger of Ammonia than Lond.)	1 in 4½.
79.	LINIMENTUM CHLOROFORMI	1 in 2.
95.	LINIMENTUM CROTONIS	1 in 8.
131.	LINIMENTUM HYDRARGYRI . . .	1 of Mercury in 6.
141.	LINIMENTUM IODI	of Iodine 1⅛ in 10.
177.	LINIMENTUM OPII	(Tinct. Opii) 1 in 2.
193.	LINIMENTUM POTASSII IODIDI CUM SAPONE.	1 in 9.
217.	LINIMENTUM SAPONIS.	
226.	LINIMENTUM SINAPIS COMP. . .	(Oil Mustard) 1 in 40.
247.	LINIMENTUM TEREBINTHINÆ	1 in 1½.
248.	LINIMENTUM TEREBINTHINÆ ACETICUM . .	1 in 3.

LINUM.

FLAX.

The plant *Linum usitatissimum* is almost universally grown, the seeds only being of medicinal value, from which are procured the Meal and the Oil of Linseed.

LINI FARINA.

LINSEED MEAL.

The seeds of the *Linum usitatissimum*, ground and deprived of the oil by expression, and the cakes reduced to powder.

(In all the Pharmacopœias; Fr. powder of the Seeds, Farine de Lin; Pr. Placenta Lini.)

Preparation.

CATAPLASMA LINI.

Linseed Meal, 4; Olive Oil, ½; boiling Water, 10: mix the Linseed Meal with the Oil, add the Water gradually, constantly stirring.

Applied to inflamed and suppurating parts.

(Same as Brit. 1864, Lond. and Fr.)

Critics have said, why deprive the seeds of their oil only to add another oil? The answer is that Linseed should not be kept long after being crushed, for it soon becomes rancid, and the seeds are very troublesome to bruise when wanted; the powder keeps perfectly well, if dry, and the oil can at any time be added, and as Olive Oil answers the purpose and is sweet, it has been preferred for Cataplasms.

LINI SEMEN.

LINSEED.

The seeds of the *Linum usitatissimum*, the envelope or testa of which abounds in a peculiar gummy matter or mucilage, readily imparted to hot water.

(In all the Pharmacopœias except Austr.)

Medicinal Properties.

Demulcent and emollient. Employed in catarrh, dysentery, nephritic and calculous complaints, and inflammatory affections of the mucous membranes and urinary passages.

Preparations.

INFUSUM LINI.

Linseed, 160 grs.; fresh Liquorice Root, sliced, 60 grs.; boiling Distilled Water, 10 oz.: infuse four hours and strain. =(1 in 30).

(Same as Brit. 1864; Lond. Edin. and U. S.; not in others.)

INCOMPATIBLES.—Preparations of lead and iron, and most metallic salts.

OLEUM LINI.

The Oil contained in the inner part of the seed expressed without heat. Sp. g. ·927 to ·934.

(In all the Pharmacopœias.)

A useful emollient to burns or scalds, either alone or mixed with Lime Water.

Linseed Oil, when issuing from the seed whilst pressing, has scarcely any of the odour or taste of the Linseed Oil of the shops, but is acquired by a very short exposure to the air. For medicinal purposes it should be procured as fresh as possible.

LIQUORES.

SOLUTIONS.

The Solutions of former Pharmacopœias which are omitted from the British are:—Liquor Aluminis Compositus, Lond.; Ammoniæ Sesquicarbonatis, Lond. Edin.; Antimonii Tartarati (*see* VINUM); Arsenici et Hydrargyri Hydriodatis, Dub.; Barii Chloridi, Lond. Edin. Dub.; Calcii Chloridi, Edin. Dub.; Cupri Ammonio-Sulphatis, Lond. Edin.; Hydrargyri Pernitratis (*see* LIQ. HYDR. NITR. ACID.); Iodinii Compositus, Edin. (*see* LIQ. IODI); Potassæ Carbonatis, Lond. Dub.; Potassii Iodidi Compositus, Lond. Edin. Dub.; Sodæ Carbonatis, Dub.

The new Solutions introduced into the British Pharmacopœia are:—Liquor Atropiæ, Atropiæ Sulphatis, Calcis Saccharatus, Chlori, Epispasticus, Ferri Perchloridi, Ferri Perchloridi Fortior, Hydrargyri Nitratis Acidus, Iodi, Lithiæ Effervescens, Magnesiæ Carbonatis, Plumbi Subacetatis, Potassæ Permanganatis, Sodæ Arseniatis, Strychniæ.

The following are the Solutions of the British Pharmacopœia, the formulæ of which will be found under the names of the substances from which they are prepared:—

		Weight of solid in measures of fluid.
Page 29.	LIQUOR AMMONIÆ.	½ the strength of Liq. Amm. Fort.
27.	LIQUOR AMMONIÆ ACETATIS (as London).	
28.	LIQUOR AMMONIÆ CITRATIS (as London).	
29.	LIQUOR AMMONIÆ FORTIOR.	
34.	LIQUOR ANTIMONII CHLORIDI.	
4.	LIQUOR ARSENICALIS	1 in 120.
5.	LIQUOR ARSENICI HYDROCHLORICUS .	1 in 120.
43.	LIQUOR ATROPIÆ	1 in 120.
44.	LIQUOR ATROPIÆ SULPHATIS	1 in 120.
52.	LIQUOR BISMUTHI ET AMMON. CITRAT.	
59.	LIQUOR CALCIS	1 in 800.
57.	LIQUOR CALCIS CHLORATÆ	1 in 10.
59.	LIQUOR CALCIS SACCHARATUS	1 in 68.
78.	LIQUOR CHLORI. Solution of Chlorine.	
66.	LIQUOR EPISPASTICUS. Blistering Liquid.	
114.	LIQUOR FERRI PERCHLORIDI.	1 in 3.
113.	LIQUOR FERRI PERCHLORIDI FORTIOR.	1 in 1.
114.	LIQUOR FERRI PERNITRATIS	1 in 7.
118.	LIQUOR FERRI PERSULPHATIS.	

		Weight of solid in measures of fluid.
Page 133.	LIQUOR HYDRARGYRI NITRATIS ACIDUS. Caustic.	
136.	LIQUOR HYDRARGYRI PERCHLORIDI .	1 in 960.
141.	LIQUOR IODI . . . . . Iodine	1 in 25.
155.	LIQUOR LITHIÆ EFFERVESCENS . .	5 grs. in 10 oz.
159.	LIQUOR MAGNESIÆ CARBONATIS . . .	1 in 37.
166.	LIQUOR MORPHIÆ ACETATIS	1 in 123.
167.	LIQUOR MORPHIÆ HYDROCHLORATIS .	1 in 123.
190.	LIQUOR PLUMBI SUBACETATIS.	
190.	LIQUOR PLUMBI SUBACETATIS DILUTUS	1 in 80.
194.	LIQUOR POTASSÆ. . . . Hydrate of Potash	1 in 18.
197.	LIQUOR POTASSÆ EFFERVESCENS.	
200.	LIQUOR POTASSÆ PERMANGANATIS . .	1 in 120.
228.	LIQUOR SODÆ . . . . . Hydrate of Soda	1 in 25.
229.	LIQUOR SODÆ ARSENIATIS	1 in 120.
231.	LIQUOR SODÆ CHLORATÆ.	
230.	LIQUOR SODÆ EFFERVESCENS Bicarbonate	1 in 320.
239.	LIQUOR STRYCHNIÆ	1 in 120.
259.	LIQUOR ZINCI CHLORIDI.	

Liquors not officinal will be found in the Index.

LITHIA.

LITHIA.

LO; eq. 15.

The Oxide of the alkaline metal Lithium (L; eq. 7), a silver-white, brilliant, ductile metal, having the density of 0·59, being therefore the lightest metal known.

This oxide was introduced into medicinal use by Dr. Garrod. It was discovered in 1817, by Arfvedson. It is obtained from several minerals,—Petalite, Lepidolite, and Tryphilline, from the latter of which the Author has chiefly prepared it.

The process is tedious and difficult, and probably on that account omitted from the British Pharmacopœia.

The Carbonate and Citrate are the only preparations employed therapeutically.

LITHIÆ CARBONAS.

CARBONATE OF LITHIA.

LO,CO_2, eq. 37; or L_2CO_3, eq. 74.

In white powder or in minute crystalline grains.

Solubility: in cold Water, 1 in 100. Insoluble in Alcohol.

Test.—10 grains of the Salt neutralized with Sulphuric Acid and after-

wards heated to redness, leave 14·86 grains of dry Sulphate of Lithia, which, when redissolved in Distilled Water, yields no precipitate with Oxalate of Ammonia or Solution of Lime—indicating absence of Lime and Magnesia.

Medicinal Properties.

Lithia, combined with Carbonic Acid, given in a diluted solution, as Lithia Water, acts as a powerful diuretic, probably more so than the corresponding Salts of Potash or Soda. In certain states of the system in which Urate of Soda is liable to be deposited in the tissues, leading to the production of gouty inflammation, the administration of Lithia Salts is attended with advantage, probably by aiding elimination and likewise by assisting the solution of the urate in the animal fluids. Urate of Lithia is very soluble; Lithia salts are therefore most useful when Uric Acid abounds in the urine.

Dose.—3 to 6 grs. in 3 or 4 oz. aerated water.

(Brit. 1864 and U. S. only.)

LIQUOR LITHIÆ EFFERVESCENS. 10 oz. contain 5 grs. Carbonate of Lithia.

Dose.—5 to 10 oz.

A new preparation.

LITHIÆ CITRAS.

CITRATE OF LITHIA.

$3LO,C_{12}H_5O_{11}$; or $L_3C_6H_5O_7$; eq. 210.

A white, deliquescent, amorphous powder, made by acting upon 50 grains of Carbonate of Lithia with 100 grains of Citric Acid, instead of 90 dissolved in 1 oz. of water, as directed by the Pharmacopœias.

Solubility: in Water, 1 in $2\frac{1}{2}$, without leaving any residue.

Test.—20 grains of the Salt, burned at a low red-heat, with free access of air, leaves 10·6 grains of white residue: Carbonate of Lithia.

Medicinal Properties.

Similar to those of the Carbonate.

Dose.—5 to 10 grs. largely diluted.

(Brit. 1864; in no other Pharmacopœia.)

LOBELIA.

LOBELIA.

The herb *Lobelia inflata* in flower, dried; imported from North America.

Medicinal Properties.

In small doses it is diaphoretic and expectorant. More freely used, it is cathartic and emetic; but as an emetic it is too distressing as well as too hazardous for general use, as it has a powerful effect on the respiration, and may cause death. It is chiefly used in spasmodic asthma, also in catarrh and other laryngeal and pectoral affections, severe croup, and chronic bronchitis. In some cases a useful adjunct to diuretics.

(In all the Pharmacopœias except Pr.)

Preparations.

TINCTURA.

Lobelia, dried and bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and let it drain, pour on the remaining spirit, and when it ceases to drop, press and wash the marc with spirit to make up 8. =(1 in 8).

(Same as Brit. 1864, Lond. Edin. and Dub.; U. S. 1 in 7¾; (Austr. 1 and 6; Belg. and Fr. 1 in 5 by weight;) not in Pr.)

Dose.—10 to 30 minims as an antispasmodic; 4 drms. as an emetic.

TINCTURA ÆTHEREA.

Lobelia, dried and bruised, 1; Spirit of Ether, 8: macerate seven days, press, and strain 8. =(1 in 8).

(Same strength as Brit. 1864, Lond. and Edin.; (Belg. 1 in 5 by weight); not in others.)

Dose.—10 to 30 minims.

ANTIDOTES.—In case of poisoning by Lobelia, the most active stimulants, internal as well as external, should be employed.

LUPULUS.

HOP.

The dried catkins of the female plant of the *Humulus Lupulus*, cultivated in England.

Medicinal Properties.

Tonic, stomachic, and moderately narcotic. Used in diseases of local debility with morbid vigilance and other nervous derangement, producing sleep where opiates are objectionable. Hops may be used topically as fomentation or poultice, as a resolvent or discutient in painful swellings and tumours.

(Brit. 1864, Lond. Edin. Belg. U. S.; Pr. Glandulæ Lupuli; Fr. Houblon; not in others.)

The golden dust attached to the scale of the Hop (Lupuline) is sometimes conveniently used in doses of 5 to 10 grs.

Very freshly dried Hops, made into a pillow, procure sleep.

Preparations.

EXTRACTUM.

Hop, 8; Rectified Spirit, 15; Distilled Water, 80: macerate the Hop in the spirit for seven days, press out the tincture, filter, and distil off the spirit, leaving a soft extract; boil the residual Hop with the Water for one hour, then express the liquor, strain, and evaporate by a water-bath to the consistence of a soft extract; mix the two extracts and evaporate at a temperature not exceeding 140° F., to a pilular consistence.

(Same as Brit. 1864; in Lond. and Edin., but without spirit; Fr. Extrait Alcoölic de Houblon; Austr. and Belg. alcoholic from Lupuline; not in others.)

Dose.—5 to 10 grs.

INFUSUM.

Hops, 1; boiling Distilled Water, 20: infuse two hours and strain. =(1 in 20).

(Same as Brit. 1864; Lond. 1 in 27; U. S. 1 in 32; Fr. 1 in 100; not in others.)

Dose.—1 to 2 oz.

TINCTURA.

Hop, 1; Proof Spirit, 8: macerate forty-eight hours in 6 of the spirit, agitating occasionally, pack in a percolator, let it drain, add the remaining spirit, and when fluid ceases to drop, wash the marc, filter, and make up 8. =(1 in 8).

(Same as Brit. 1864; Lond. 1 in 6⅔; U.S. 1 in 6; Dub. and Edin. made with Lupuline, 1 in 8; (Belg. with Lupuline 1 in 5—also Tinctura Vinosa, made with Alcohol and Malaga, 1 in 33 by weight); not in others.)

Dose.—½ to 2 drms.

INCOMPATIBLES.—Mineral acids, metallic salts.

Not Officinal.

EXTRACTUM LUPULINÆ.—Exhaust Lupuline with Rectified Spirit, and evaporate the strained liquor to a proper consistence. The extract produced is just half the original weight of the Lupuline employed.

Dose.—3 to 6 grs.

TINCTURA LUPULINÆ (Dub.).—Lupuline (or the powder attached to the scale of hops recently dried), 1; Rectified Spirit, 8: digest for seven days, strain, press the marc, filter, and add spirit to make up 8; or by percolation. =(1 in 8).

Dose.—½ to 2 drms.

MAGNESIUM.

Mg, eq. 12; or **Mg**, eq. 24.

Magnesium, the metallic base of Magnesian Salts, does not exist native. It may be obtained artificially. When set on fire it produces a powerful actinic light, and is used by photographers on this account.

It is a brilliant grey metal, sp. gr. 1·750, slightly resembling Silver, malleable, fusible at a low temperature, and convertible into Magnesia by the combined action of air and moisture.

Sulphate of Magnesia was first artificially obtained in England by Dr. Grew in 1675, by evaporation from the water of Epsom Spring (whence the name of Epsom Salts). The chief source of the Magnesia now sold is Magnesian Limestone, Double Carbonate of Magnesia and Lime, called Dolomite, and is obtained by a process discovered by Dr. Henry, of Manchester. It was first chemically distinguished from Lime by Dr. Black, in 1755, who showed the difference between Magnesia and its carbonate. From the mode of procuring it, it is frequently termed Calcined Magnesia.

There are two kinds of Magnesia admitted into the Pharmacopœia, the heavy and the light. The former is that which is commonly used in pharmacy, it being smoother, more readily miscible with water, and is more compact. It is probably from these causes that it is preferred in medicine, and in the Pharmacopœia it is clearly meant to be used, unless the light is expressly ordered.

The forms in which Magnesia is used are:—Magnesia, M. Levis, Magnesiæ Carbonas, M. Carbonas Levis, and M. Sulphas.

MAGNESIA.

MAGNESIA.

MgO, eq. 20; or **MgO**, eq. 40.

Heavy Carbonate of Magnesia, heated in a Cornish crucible until all the Carbonic Acid is driven off.

It is a white, heavy powder, scarcely soluble in water, but readily dissolved by acids without effervescence. Its solution in Hydrochloric Acid, when neutralized by a mixed solution of Ammonia and Hydrochlorate of Ammonia, gives a copious crystalline precipitate when Phosphate of Soda is added to it.

Solubility: in cold water, 1 in 5412; in hot water, 1 in 36,000; like lime, it is more soluble in cold than in hot water.

Test.—Dissolved in Nitric Acid and neutralized with a mixture of Ammonia and Hydrochlorate of Ammonia, it does not give any precipitate with Oxalate of Ammonia or Chloride of Barium—indicating absence of Lime and Sulphates.

Medicinal Properties.

Antacid, laxative, and antilithic. Much used in dyspepsia, heartburn, sick headache, gout, and other complaints attended with acidity and constipation. As a laxative, it may often be used with advantage when other medicines occasion nausea; generally combined with other purgatives. It is an excellent and mild purgative for children.

It frequently becomes aggregated into a solid mass when prescribed in mixtures, especially when prescribed with the sulphate.

(Brit. 1864, Dub. and Fr. Hydrate de Magnésie; not in others.)

Dose.—10 to 20 grs. as an antacid and alterative, 20 to 60 grs. as a purgative.

Although the heavy powder is preferred by many for its smoothness, the light powder is found to be quicker in its action.

INCOMPATIBLES.—All acids.

MAGNESIA LEVIS.

LIGHT MAGNESIA.

MgO, eq. 20; or **MgO**, eq. 40.

Light Carbonate of Magnesia, heated in a Cornish crucible until all the Carbonic Acid is driven off.

A bulky white powder, differing from Magnesia (heavy Magnesia) only in its great levity, the volumes corresponding to the same weight being in the ratio of $3\frac{1}{2}$ to 1.

It does not mix so readily with water nor does it make so smooth a draught as the heavy.

Test.—Does not effervesce with Acids.

(In all the Pharmacopœias.)

Dose.—10 to 20 grs. as an antacid; 20 to 60 grs. as a purgative.

Contained in Pulvis Rhei Comp.

MAGNESIÆ CARBONAS.

CARBONATE OF MAGNESIA.

$(MgO,CO_2)_3+MgO+5HO$, eq. 191; or $(\mathbf{MgCO_3})_3\mathbf{MgO.5H_2O}$, eq. 382.

A white granular powder, precipitated from a boiling solution of Sulphate

of Magnesia by a solution of Carbonate of Soda, the whole evaporated to dryness, and the dry residue digested in water and collected on a filter and washed, so that the Sulphate of Soda is entirely washed out.

Test.—With excess of Hydrochloric Acid it forms a clear solution, in which Chloride of Barium causes no precipitate—indicating absence of Sulphuric Acid. Another portion of the solution, supersaturated with Ammonia, gives no precipitate with Oxalic Acid—indicating absence of Lime. 50 grains calcined at red-heat are reduced to 22.

(Brit. 1864; Dub. Magnesiæ Carbonas Ponderosum; not in any other Pharmacopœia.)

Dose.—10 to 20 grs. as an antacid; 30 to 60 grs. as a purgative.

Preparation.

LIQUOR MAGNESIÆ CARBONATIS. *Syn.* FLUID MAGNESIA.

Is prepared by impregnating water with Carbonic Acid under pressure in which freshly-precipitated Carbonate of Magnesia is suspended.

Each fluid ounce contains 13 grains of Carbonate = 5 grains of Calcined Magnesia.

Dose.—1 to 2 oz.

A new preparation.

MAGNESIÆ CARBONAS LEVIS.

LIGHT CARBONATE OF MAGNESIA.

$(MgO,CO_2)_3+MgO+5HO$, eq. 191; or $(\mathbf{Mg.CO_3})_3.\mathbf{MgO.5H_2O}$, eq. 382.

A very light powder, precipitated cold from Sulphate of Magnesia solution by Carbonate of Soda, the precipitate being washed in boiling water until the washings do not precipitate with Chloride of Barium, is then dried at 212°. When examined under the microscope, it is found to be partly amorphous, with numerous slender prisms intermixed. In other respects it is similar to Magnesiæ Carbonas.

Solubility: in cold water, 1 in 2493; in hot water, 1 in 9000.

(In all the Pharmacopœias; Fr. Carbonate de Magnésie.)

Dose.—10 to 20 grs. as an antacid; 30 to 60 grs. as a purgative.

MAGNESIÆ SULPHAS.

SULPHATE OF MAGNESIA.

MgO,SO_3+7HO, eq. 123; or $\mathbf{MgSO_4\,7H_2O}$, eq. 246.

In minute, colourless, transparent, rhombic prisms, possessing a bitter taste.

Solubility: in cold water, 10 in 13, and measures 18.

Test.—The aqueous solution, at ordinary temperatures, is not precipitated by Oxalate of Ammonia—indicating absence of Lime. The precipitate given by Carbonate of Soda, when obtained from a boiling solution of 100 grains of the salt, should, when well washed, dried, and heated to redness, weigh 16·26 grains.

(In all the Pharmacopœias.)

Contained in Mistura Sennæ Comp. 1 in 5.

INCOMPATIBLES.—Alkaline Carbonates, Lime Water, Acetate of Lead, Nitrate of Silver.

Sulphate of Magnesia should not be prescribed with Potassio-tartrate of Soda, for although the solutions of these two salts are transparent when first mixed, yet after a short time, Tartrate of Magnesia will precipitate. The following prescription will illustrate this :—

℞ Sodæ Potassio-tart. ʒj, Magnes. Sulph. ʒij, Aquæ ad ʒiss.

Medicinal Properties.

A mild and safe cathartic, operating with little pain or nausea. Used in colic and obstinate constipation, and in most cases where a cathartic is required which shall not cause debility or relaxation of the stomach.

Dose.—2 to 4 drms.

Preparation.

ENEMA.

Sulphate of Magnesia, 1 oz.; Olive Oil, 1 oz.; Mucilage of Starch, 15 oz.: dissolve the Sulphate of Magnesia in the Mucilage, then add the Oil.

For one enema.

(Same as Brit. 1864; Edin. Dub. Enema Catharticum; not in others.)

Not Officinal.

LIQUOR MAGNESIÆ SULPHATIS, Dr. Henry, of Dublin.—Saturated Solution of Sulphate of Magnesia, 7 (equal to 4 of crystals); Diluted Sulphuric Acid, 1: mix.

MANGANESII OXIDUM NIGRUM.

BLACK OXIDE OF MANGANESE.

MnO_2, eq. 43·5; or $\mathbf{MnO_2}$, eq. 87.

Used for producing Chlorine.

Not Officinal.

MANGANESII OXIDUM PRÆPARATUM.—Digest finely powdered commercial black oxide in diluted Hydrochloric Acid for twenty-four hours, frequently shaking the bottle containing them; then pour off the acid, wash the oxide thoroughly with water, pouring off the lighter portions each time for use, and rejecting the heavier and coarser particles; finally dry in a water-bath.

Dr. Leared introduced it for medicinal use, and says it is an admirable remedy in gastrodynia, pyrosis, etc.

Dose.—10 to 30 grs.

SULPHATE OF MANGANESE, introduced by Dr. Ure as a useful purgative in gouty affections, is however, little used, being uncertain in its action, and apt to cause vomiting; its taste is disagreeably styptic.

Manganese has been associated with Iron in several recent pharmaceutical preparations, but with what advantage is not very clear.

MANNA.

MANNA.

A concrete exudation from the stem of the *Fraxinus Ornus* and *F. rotundifolia*, obtained by incision.

Cultivated for the purpose chiefly in Calabria and Sicily.

Consists chiefly of Mannite, $C_6H_7O_6$, or $C_2H_7O_3$; eq. 91; together with common Sugar and extractive matter.

Solubility: in Water, 1 in 5; in Rectified Spirit, 1 in 120.

Medicinal Properties.

Nutritious, particularly when recent. A mild laxative; does not excite inflammation; useful for children and delicate females.

(In all the Pharmacopœias.)

Dose.—As a laxative, from 2 drms. to 1 oz.

MARMOR ALBUM.

WHITE MARBLE.

CaO,CO_2, eq. 56; or $CaCO_3$, eq. 112.

Used in producing Carbonic Acid Gas.

MASTICHE.

MASTICH.

A resinous exudation by incision from the stem of the *Pistacia Lentiscus*, produced in the island of Scio.

Small irregular yellowish tears, semi-transparent.

Solubility: insoluble in Water; wholly soluble in Ether, Chloroform, and Oil of Turpentine; scarcely soluble in fixed Oils.

Sp. g. 1·074.

Medicinal Properties.

Stimulant. Chiefly prescribed in pills to divide active medicines, and especially with mercurials when the pills are to be silvered, to prevent the silver being acted on by the mercury.

(In all the Pharmacopœias.)

Dose.—In powder, 20 to 40 grs.

Cotton, saturated in a solution of 4 parts of Mastich with 1 of Ether, is a good stopping for decayed teeth.

(Fr. equal weights of Ether and Rectified Spirit, and Mastic to saturation.)

MATICÆ FOLIA.

MATICO LEAVES.

The dried leaves of *Artanthe elongata*, imported from Peru.

Medicinal Properties.

An agreeable aromatic tonic and stimulant, influencing the urinary passages. Locally (in substance) as a styptic, on the supposition that its action is mechanical. Its styptic properties, however, may depend on the Terebinthinate Oil it contains.

(Brit. 1864, Dub. U. S.; not in others.)

Dose.—Of the powder, ½ to 2 drms. three times daily.

Preparation.

INFUSUM.

Matico, cut small, 1; boiling Distilled Water, 20: infuse half an hour, and strain.

(Same as Brit. 1864, Dub. and Fr.; not in others.)

Dose.—1 to 2 oz.

Not Officinal.

TINCTURA (Dub.).—Matico leaves, in coarse powder, 1; Proof Spirit, 5: macerate fourteen days, strain, express and filter. = (1 in 5).

Astringent. Useful in catarrh of the bladder of the aged.

Dose.—1 to 2 drms.

MEL.

HONEY.

A saccharine secretion deposited by the Hive Bee in the honeycomb.

Test.—Boiled with Water for five minutes, and allowed to cool, it does not become blue with the Solution of Iodine—indicating absence of Flour.

(In all the Pharmacopœias.)

Medicinal Properties.

Demulcent and laxative, but apt to gripe and occasion flatulency when given in efficient doses; this is more particularly the case with old honey. It is more generally used as a vehicle for other medicines. A useful addition to gargles. An external application to foul ulcers. Equal parts honey and flour an excellent poultice for boils.

Preparations.

MEL BORACIS. 1 in 8.—*See* BORAX, page 53.

MEL DEPURATUM. CLARIFIED HONEY.

Melt in a water bath, and strain while hot through flannel previously moistened with warm water.

(In all the Pharmacopœias, except Edin.)

OXYMEL.

Clarified Honey, 8; Acetic Acid, 1; Distilled Water, 1: liquefy the Honey by heat, and mix.

A pleasant addition to Gargles. Sometimes used as a vehicle to expectorant medicines, and to flavour fever drinks.

(Same as Brit. 1864; Lond. and Dub.; Pr. Austr. Honey 2, Common Vinegar 1; Fr. Honey 4, Vinegar 1; Belg. Honey 4, Sugar 4, Dil. Acet. Acid 3; not in others.)

Dose.—1 to 2 drms.

Mel Rosæ is omitted in the Pharmacopœia.

MENTHÆ PIPERITÆ OLEUM.

ENGLISH OIL OF PEPPERMINT.

The Oil distilled in Britain from fresh flowering Peppermint.

Sp. g. 0·920.

Contained in Pilula Rhei Composita.

Medicinal Properties.

A grateful aromatic, stimulant, and carminative. Allays nausea, relieves spasmodic pains in the stomach, expels flatus. Covers the taste of nauseous medicines, such as Rhubarb, and mitigates the griping effect of purgatives. Useful in the flatulent colic of children.

The fresh herb, bruised, and applied to the epigastrium, often allays sickness, and is useful in cholera infantum.

(In all the Pharmacopœias except Dub.)

Dose.—1 to 4 minims on sugar, or in emulsion.

Preparations.

AQUA MENTHÆ PIPERITÆ.

English Oil of Peppermint, $1\frac{1}{2}$ drm.; Water, $1\frac{1}{2}$ gall.: distil 1 gall. =(Oil 1 in 853).

(Same as Brit. 1864; Dub. from essences; U.S. stronger; Lond. Edin. Austr. Belg. Pr. and Fr. from the fresh herb.)

Dose.—1 to 2 oz.

ESSENTIA MENTHÆ PIPERITÆ.

English Oil of Peppermint, 1; Rectified Spirit, 4: mix. =(1 in 5).

(Dub. 1 in 10; not in others.)

Dose.—10 to 20 minims.

SPIRITUS MENTHÆ PIPERITÆ.

English Oil of Peppermint, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

One-fifth of the strength of Brit. 1864.

(Brit. 1864, 1 in 10; Lond. 1 in 435; U.S. from the oil and leaves; Fr. Alcoölat de Menthe Poivrée, and Edin. distilled from fresh herb; Austr. from dry herb; not in others.)

Dose.—30 to 60 minims, or for children under five years, 1 to 3 minims.

NOTE.—An agreeable Syrup is made by adding 60 minims of the Spirit to 1 oz. of Syrup.

MENTHÆ VIRIDIS OLEUM.

ENGLISH OIL OF SPEARMINT.

The Oil distilled in Britain from fresh flowering Spearmint.

Medicinal Properties.

Similar to those of Oleum Menthæ Piperitæ.

(In all the Pharmacopœias except Edin.)

Dose.—1 to 4 minims on sugar, or in emulsion.

Preparation.

AQUA MENTHÆ VIRIDIS.

English Oil of Spearmint, 1½ drm.; Water, 1½ gall.: distil 1 gall. = (Oil 1 in 853).

(Same as Brit. 1864; Dub. from essence; U.S. stronger; Lond. Edin. Austr. Belg. with Spirit and from dry herb; not in others.)

Dose.—1 to 2 oz.

MEZEREI CORTEX.

MEZEREON BARK.

The dried bark of the *Daphne Mezereum*, Mezereon; or *Daphne Laureola*, Spurge, or Wood Laurel.

Medicinal Properties.

A stimulant, acting on the kidneys. Rarely used alone. With Sarsaparilla it is employed as a sudorific and alterative in venereal, rheumatic, scrofulous, and chronic cutaneous diseases. Applied to the skin, it produces inflammation and vesication, though slow in action.

The bark soaked in hot vinegar-and-water is applied with a compress to produce a blister: ointment of the bark is used to keep issues or blisters open.

Contained in Decoctum Sarsæ Compositum.

(In all the Pharmacopœias; Fr. Méséréon ou bois gentil.)

Preparation.

EXTRACTUM MEZERII ÆTHEREUM.—Ethereal Extract of Mezereon.

Mezereon Bark, cut small, 1 lb.; Rectified Spirit, 8 pints; Ether, 1 pint: macerate the mezereon in six pints of the spirit for three days with frequent agitation, strain and press. To the residue of the mezereon, add the remainder of the Spirit, and again macerate for three days, with frequent agitation, strain and press, mix and filter the strained liquors; recover the greater part of the Spirit by distillation, evaporate what remains to the consistence of a soft extract, put this into a stoppered bottle with the Ether, and macerate for twenty-four hours, shaking them frequently, decant the ethereal solution, recover part of the Ether by distillation, and evaporate what remains, to the consistence of a soft extract.

Used in preparing Linimentum Sinapis Compositum; 8 grs. are contained in 1 oz.

(Austr. Belg. Fr. Extrait Ethéré de Garou, and Pr.; not in others.)

Not Officinal.

UNGUENTUM MEZEREI (*Pr.*).—Ethereal Extract, 1 part; Wax Ointment, 7: mix.

MICA PANIS.

SOFT CRUMB OF BREAD.

Contained in Cataplasma Carbonis.

MISTURÆ.

MIXTURES.

The following mixtures, which were in former Pharmacopœias, are omitted from the British:—Mistura Acaciæ (*see* MUCILAGO ACACIÆ); Althææ, Edin.; Camphoræ, Lond. Edin. Dub. (*see* AQUA CAMPHORÆ); Camphoræ cum Magnesia, Edin.; Hordei, Lond. and Edin.

The following are the mixtures of the British Pharmacopœia:—

Dose.	Page.		Proportions.
½ to 1 oz.	25.	MISTURA AMMONIACI	1 in 32.
1 to 2 oz.	31.	MISTURA AMYGDALÆ.	
1 to 2 oz.	92.	MISTURA CREASOTI	1 minim to 1 oz., or 1 in 480.
1 to 2 oz.	93.	MISTURA CRETÆ	14 grs. to 1 oz., or 1 in 34.
1 to 2 oz.	113.	MISTURA FERRI AROMATICA.	
1 to 2 oz.	108.	MISTURA FERRI COMPOSITA	1 in 128.
½ to 1 oz.	124.	MISTURA GENTIANÆ (Scotch Infusion).	
½ to 2 oz.	128.	MISTURA GUAIACI	11 grs. to 1 oz., or 1 in 42.
½ to 2 oz. for a child.	220.	MISTURA SCAMMONII	2 grs. to 1 oz., or 1 in 240.
1 to 1½ oz.	224.	MISTURA SENNÆ COMPOSITA .	1 oz. Magn. Sulph. in 5 oz.
1 to 2 oz.	237.	MISTURA SPIRITUS VINI GALLICI.	

MORI SUCCUS.

MULBERRY JUICE.

The juice of the ripe fruit of the *Morus nigra.*

Medicinal Properties,

Refreshing and laxative; serves to prepare a grateful drink well adapted to febrile cases.

(Fr. Mûrier Noir.)

Preparation.

SYRUPUS MORI.

Mulberry Juice, 20; Refined Sugar, 32; Rectified Spirit, $2\frac{1}{2}$: heat the juice to the boiling-point, and when it has cooled filter it; dissolve the Sugar in the filtered liquid by a gentle heat, and add the spirit; the product should weigh 54. Sp. g. 1·330.

(Same as Brit. 1864, Lond. Austr. Belg. and Fr. Sirop de Mûres; not in others.)

Dose.—1 to 2 drms.

An agreeable addition to a gargle for sore-throat. Used as a colouring matter for draughts, 1 drm. to 1 oz.

MORPHIÆ ACETAS.

ACETATE OF MORPHIA.

$C_{34}H_{19}NO_6$, $C_4H_3O_3+HO$; or $C_{17}H_{19}NO_3.C_2H_4O_2$, eq. 345.

A white powder. Part of its Acetic Acid is often driven off in drying.

Solubility: in Water, 1 in 6; in Spirit, 1 in 100.

(In all the Pharmacopœias except Brit. 1864, Fr. and Pr.

Dose.—$\frac{1}{8}$ to $\frac{1}{2}$ a grain.

LIQUOR.

Acetate of Morphia, 4 grs.; Diluted Acetic Acid, 8 minims; Rectified Spirit, 2 drms.; Distilled Water, 6 drms.: dissolve the Acetate in the mixed liquids. =(1 in 123).

Dose.—10 to 60 minims.

(Same as Dub.; half the strength of Lond.)

Not Officinal.

SOLUTION OF ACETATE OF MORPHIA for Hypodermic injection.

Take care to have a neutral Solution of the Acetate, and that there is 1 grain of the Acetate of Morphia in every 6 minims of the solution.

MORPHIÆ HYDROCHLORAS.

HYDROCHLORATE OF MORPHIA.

Syn. MURIATE OF MORPHIA, *Edin. Dub.*

$C_{34}H_{19}NO_6,HCl+6HO$; or $C_{17}H_{19}NO_3.HCl.3H_2O$; eq. 375·5.

Prepared from Opium.

In white, flexible, acicular prisms of a silky lustre.

Solubility: in Water, 1 in 20; in Spirit, 1 in 90.

Test.—Entirely destructible by heat, leaving no residue. 20 grains of the Salt, dissolved in half an ounce of warm water, with Ammonia added in the slightest possible excess, gives, on cooling, a crystalline precipitate, which, when washed with a little cold water, and dried by exposure to the air, weighs 15·18 grains—pure Morphia.

As pure Morphia is insoluble in Water, it is rarely used in medicine; the Salts only are used.

Of these, the Pharmacopœia has selected the Acetate and the Hydrochlorate.

The following may be reckoned as therapeutical equivalents:—
1 gr. Hydrochl. Morph. = 8 grs. Opium = 7 grs. Powd. Opium = 4 grs. Ext. Opium = 93 minims Tinct. Opium.

(In all the Pharmacopœias; Edin. Dub. Morphiæ Murias; Fr. Chlorhydrate de Morphine.)

INCOMPATIBLES.—Alkalies and Alkaline Earths, astringent vegetable Infusions and Decoctions.

ANTIDOTES.—*See* Opium, page 176.

Medicinal Properties.

Hydrochlorate of Morphia possesses the anodyne and soporific powers of Opium, yet it acts more agreeably, being less likely to produce headache and nausea. It is also less exciting and stimulating than Opium.

Dose.—$\frac{1}{8}$ to $\frac{1}{2}$ gr.

Preparations.

LIQUOR.

Hydrochlorate of Morphia, 4 grs.; Dilute Hydrochloric Acid, 8 minims; Rectified Spirit, 2 drms.; Distilled Water, 6 drms.: dissolve. = (1 in 123).

(Same as Brit. 1864, Edin. and Dub. 4 grs. to 1 oz.; Lond. 8 grs. to 1 oz.; not in others.)

Each fluid drachm contains half a grain.

Dose.—15 to 30 minims. Br. Ph. dose 10 to 60 minims.

SUPPOSITORIA MORPHIÆ.

Hydrochlorate of Morphia, 6 grs.; Oil of Theobroma, 90 grs.; Benzoated Lard, 64 grs.; White Wax, 20 grs.: melt the Wax and Oil of Theobroma with a gentle heat, then add the Hydrochlorate of Morphia and Benzoated Lard previously rubbed together in a mortar, and mix all the ingredients thoroughly, pour the mixture while it is fluid into suitable moulds of the capacity of 15 grains, or the fluid mixture may be allowed to cool, and then be divided into twelve equal parts, each of which should be made into a conical form.

Each suppository contains $\frac{1}{2}$ grain of Hydrochlorate of Morphia.

(Twice the strength of Brit. 1864; not in others.)

TROCHISCI MORPHIÆ.

Hydrochlorate of Morphia, 20 grs.; Tincture of Tolu, $\frac{1}{2}$ oz.; Refined Sugar, in powder, 24 oz.; Gum Arabic, in powder, 1 oz.; Mucilage of Gum Arabic, 2 oz., or a sufficiency; boiling Distilled Water, $\frac{1}{2}$ oz.: divide the mass into 720 lozenges.

Each lozenge contains $\frac{1}{360}$ gr. of Hydrochlorate of Morphia.

Dose.—One or two occasionally for cough.

(Brit. 1864 and Edin. only.)

TROCHISCI MORPHIÆ ET IPECACUANHÆ.

Hydrochlorate of Morphia, 20 grs.; Ipecacuan, in fine powder, 60 grs.;

Tincture of Tolu, ½ oz.; Refined Sugar, in powder, 24 oz.; Gum Arabic, in powder, 1 oz.; Mucilage of Gum Arabic, 2 oz., or a sufficiency; Distilled Water, ½ oz.; divide the mass into 720 lozenges.

Each lozenge contains $\frac{1}{36}$ gr. of Hydrochlorate of Morphia, and $\frac{1}{12}$ of Ipecacuanha.

Dose.—One or two occasionally for cough.

(Brit. 1864 and Edin. only.)

For preparations of Morphia which are not officinal, see OPIUM, page 177.

MORRHUÆ OLEUM.

COD-LIVER OIL.

The Oil extracted from the fresh liver of the *Gadus morrhua* by a steam-heat or water-bath not exceeding 180°.

Sp. g. from 0·915 to 0·929.

(In all the Pharmacopœias except Edin.; Austr. Belg. Fr. Huile de Foie de Morue, Pr. Ol. Jecoris Aselli.)

Medicinal Properties.

It has long been employed in the north of Europe in rheumatic and strumous diseases, and was first recommended to the profession generally by the German practitioners; but it was not till the appearance of Professor Bennet's treatise in 1841 that it came into general use in England.

Its value is thought to depend on the iodine contained in it, but it is rarely found in the best oil in greater proportion than ·05 per cent.

Demulcent and nutrient. Most efficient in scrofulous diseases, glandular swellings, diseases of the joints, tabes mesenterica, rickets and chronic rheumatism; and generally in all chronic cases of impaired digestion, assimilation, and nutrition. In pulmonary consumption it deservedly possesses a high reputation.

Dose.—1 to 4 drms., Brit. Ph. dose, 1 to 8 drms., on Orange Juice, water, or a mixture of Tincture of Orange with Nitric Acid and Syrup; or 2 drms. rubbed with either 30 grs. of Powdered Acacia or 20 grs. Tragacanth and 1½ drm. of Distilled Water till an emulsion is formed, and then gradually add, with constant trituration, 1 oz. of Peppermint Water, forms a nice emulsion.

It has lately been asserted that the water which oozes from the Livers possesses the properties of the Oil in an eminent degree, and the manner of evaporating and purifying the extract has been patented. 5 grains of the Extract is said to be equal in value to a tablespoonful of Cod-Liver Oil!

28 lb. Livers yield 12 lb. of Oil, and 1 lb. of Water; the water, when evaporated, yields 2 oz. of Extract.

MOSCHUS.

MUSK.

The inspissated and dried secretion from the preputial follicles of the *Moschus moschiferus*, a native of Thibet and other parts of Central Asia; imported from China and India.

In grains or lumps concreted together, soft and unctuous to the touch, of a reddish-brown or ferruginous colour, having a strong and peculiar odour; contained in an oval sac or membrane about two inches in diameter.

Ether is a good solvent of Musk.

(In all the Pharmacopœias; Fr. Musc.)

Medicinal Properties.

Stimulant and antispasmodic, increasing the vigour of the circulation without materially affecting the cerebral functions. It may be given in almost all spasmodic diseases, particularly in cases of great prostration with intense nervous excitement.

Dose.—5 to 10 grs. in pill or mixture.

Not Officinal.

MISTURA (Lond.).—Musk, 3; Acacia, 3; Sugar, 3; Rose Water, 160: triturate the Musk with the Sugar, then with the Acacia; add the Rose Water gradually.
Dose.—1 to 2 oz.

MUCILAGINES.

MUCILAGES.

Mucilages are employed more as vehicles than as remedies. Mucilage of Acacia is sometimes given to relieve irritating cough, but more generally to render Oils and solutions of Resins miscible with Water; *see* ACACIA. M. Amyli, for Enemas; M. Tragacanthæ, for Lozenges, and also for suspending heavy powders in mixtures, in preference to M. Acaciæ.

Mucilago Hordei, Dub., is the only one of the former Pharmacopœias which is omitted, and is replaced by Decoctum Hordei in the British Pharmacopœia.

The Mucilages retained are:—

Page 1.	MUCILAGO ACACIÆ	1 in 2.
31.	MUCILAGO AMYLI	1 in 40.
252.	MUCILAGO TRAGACANTHÆ	1 in 80.

MYRISTICA.

NUTMEG.

The kernel of the seed of the *Myristica officinalis*, cultivated in the Banda Islands of the Malayan Archipelago, imported from Sumatra and the Molucca Islands.

Medicinal Properties.

Aromatic, stimulant, and carminative. Chiefly used to cover the taste of rhubarb and other medicines.

(In all the Pharmacopœias; Austr. Belg. Nux Moschata; Fr. Muscadier cultivé; Pr. Semen Myristicæ.)

Dose.—5 to 15 grains.

Contained in Pulvis Catechu Composita, Pulvis Creta Aromatica, Spiritus Armoraciæ Compositus, Tinctura Lavandulæ Composita.

Preparations.

OLEUM.

The oil distilled in Britain from Nutmegs. This injunction of the British Pharmacopœia is necessary, the foreign oil being very much inferior to that distilled in Britain.

(Same as Brit. 1864, Edin. and U.S.; Austr. Belg. Pr. Oleum Macidis Ætheream; not in others.)

Dose.—2 to 6 minims on sugar, or in emulsion.

Contained in Sp. Ammon. Aromat. and Pilula Aloes Socotrinæ.

OLEUM EXPRESSUM. Concrete Oil of Nutmegs.

A concrete oil, obtained from Nutmegs by expression and heat.

(Brit. 1864, Lond. and Edin. Myristicæ Adeps; Austr. Belg. Ol. Nucis Moschatæ; Fr. Beurre de Muscade; Pr. Ol. Nucistæ; not in Dub. U.S.)

Contained in Emplastrum Calefaciens and Emplastrum Picis.

SPIRITUS.

Volatile Oil of Nutmeg, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

(One-fifth of the strength of Brit. 1864; Lond. and Edin. and U.S. are very weak preparations; not in others.)

Dose.—30 to 60 minims.

MYRRHA.

MYRRH.

A gum-resinous exudation from the stem of the *Balsamodendron Myrrha*, collected in Arabia Felix and Abyssinia.

In irregular-shaped tears, of a reddish-yellow or reddish-brown colour.

Solubility: partially in Water, more soluble in Alcohol and Ether.

(In all the Pharmacopœias.)

Medicinal Properties.

A stimulant tonic. Useful in humid asthma and chronic catarrh; also in chlorosis and defective menstruation. Externally to aphthous sore mouths and diseased gums.

Dose.—10 to 30 grs.

Contained in Decoctum Aloes Compositum, Mistura Ferri Composita, Pilula Aloes et Myrrhæ, Pil. Assafœtidæ Composita, Pilula Rhei Composita.

Preparation.

TINCTURA.

Myrrh, in coarse powder, 1; Rectified Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and when it ceases to drop, pour on the remaining spirit, wash the marc, press, and make up to 8. =(1 in 8).

(Same as Brit. 1864; Lond. Dub. Edin. and U.S. 1 in 10; Austr. Belg. 1 in 5; Fr. 1 and 5; Pr. 1 and 6, by weight.)

Dose.—½ to 1 drm. More frequently used mixed with water to form a gargle.

Not Officinal.

GARGARISMA MYRRHÆ.—Tincture of Myrrh, 1; Honey, 1; Infusion of Roses, 18. mix.

Tincture of Myrrh and Borax.—*See* BORAX, page 53.

NECTANDRÆ CORTEX.

BEBEERU BARK.

The bark of the *Nectandra Rodiæi*, Greenheart Tree, imported from British Guiana.

This bark is intensely bitter, and contains an alkaloid, Beberia ($C_{38}H_{21}NO_6$), very soluble in Alcohol, less so in Ether, and very slightly in Water. The Sulphate is chiefly used.

(Brit. 1864 and U. S.)

Medicinal Properties.

Tonic and antiperiodic. Used in remittent and intermittent fevers, though not to be relied on as a substitute for the Sulphate of Quinia.

Preparation.

BEBERIÆ SULPHAS.—*See* BEBERIÆ SULPHAS, page 47.

NUX VOMICA.

NUX VOMICA.

The seeds of the *Strychnos Nux-vomica*, imported from the East Indies.

Medicinal Properties.

In very small doses, tonic, and laxative by stimulating the muscular coat of the bowel. In larger doses it operates on the whole system through the spinal motor nerves, indicated by involuntary muscular contractions. Useful in palsy and all paralytic affections, and in cases of feeble contractile powers. It is recommended in chorea and atonic dropsy, and in debilitated conditions of the alimentary canal. The extract and tincture are the preparations generally prescribed.

(In all the Pharmacopœias; Fr. Noix Vomique; Pr. Semen Strychni.)

Dose.—Of the Powder, 1 to 3 grs.

Preparations.

STRYCHNIA.—*See* STRYCHNIA, page 239.

EXTRACTUM.

Soften Nux Vomica by steam, dry rapidly, and reduce to fine powder; boil with Rectified Spirit until exhausted, strain, distil off the spirit, and evaporate to the consistence of a soft extract.

(Same as Brit. 1864; Lond. Edin. U.S. Austr. Belg. Fr.; Pr. has a spiritous extract reduced to powder, dose 1 gr., and an aqueous extract, also reduced to powder, dose 4 grs.—they are named Extractum Seminis Strychni Spirituosum and Aquosum respectively; not in Dub.)

16 oz. nuts yield 1 oz. extract.

Dose.—$\frac{1}{3}$ to 1 gr.; Brit. Pharm. $\frac{1}{2}$ to 2 grs. Often with Aloes and Ipecacuanha.

TINCTURA.

Nux Vomica, 1; Rectified Spirit, 10: soften the Nux Vomica by steam, dry rapidly, and reduce to fine powder. Macerate forty-eight hours in three-fourths of the spirit, agitating occasionally, pack in a percolator, let it drain, pour on the remaining spirit, and when it ceases to drop, press, filter, and make up to 10. =(1 in 10).

(Same as Brit. 1864; U. S. 1 in $3\frac{3}{4}$; old Dub. 1 in 4; (Austr. and Belg. 1 in 5; Fr. Teinture de Noix Vomique; Pr. Tinct. Seminis Strychni, 1 and 5 by weight), dose 12 minims; not in others.)

Dose.—10 to 30 minims.

$\frac{1}{4}$ oz. of Extract, dissolved in 40 oz. of Rectified Spirit, is equal in strength to the Tincture.

Not Officinal.

St. Ignatius's Bean.—The seeds of the *Ignatia amara*, from the Philippine Islands. They contain the same constituents as Nux Vomica, and afford about 1·2 per cent. of Strychnia.

An alcoholic Extract is made of this in the same manner as that of Nux Vomica.

Chiefly used in cases of debility of the digestive organs, and in all instances where Nux Vomica is employed.

Dose.—$\frac{1}{3}$ to 1 gr. in pill three times a day.

Antidotes.—In case of poisoning by Nux Vomica, Tobacco seems to be the best antidote. Enema Tabaci should be administered. Infusion of Tobacco, $\frac{1}{2}$ oz. to 20 oz. of boiling water, may be given till the spasms abate, and then discontinue its use. Nicotina, if at hand, in the dose of one drop, in some warm sherry and water.

OLEA.

OILS.

The Oils ordered in the Pharmacopœia consist of expressed and distilled oils: viz. the expressed are those of the Almond and the Olive, which are chiefly used for ointments and liniments; Linseed Oil appears in the Materia Medica, but is not used for preparations; Croton is the last seed-oil ordered, and is used for Linimentum Crotonis; we have also the expressed oil from the Lemon-rind, and that of the Theobroma. All the other oils are obtained by distillation.

The following Oils, found in former Pharmacopœias, are now omitted:—Oleum Æthereum, Lond.; Copaibæ, Edin.; Fœniculi, Lond.; Cassiæ, Edin.; Bergamotæ, Edin.; Aurantii, Edin. Dub.; Pulegii, Lond.; Rosæ, Edin. Dub.; Succini, Dub.

The following are newly introduced:—Oleum Coriandri, Cubebæ, Theobromæ.

The following are the Oils of the British Pharmacopœia, and will be found under the names of the substances from which they are derived:—

Page 31. OLEUM AMYGDALÆ. Expressed from the seed.

32. OLEUM ANETHI. Distilled from the fruit.

32. OLEUM ANISI. Distilled from the fruit and imported.

33. OLEUM ANTHEMIDIS. Distilled from the flowers.

Page 55. OLEUM CAJUPUTI. Distilled from the leaves and imported.
70. OLEUM CARUI. Distilled from the fruit.
70. OLEUM CARYOPHYLLI. Distilled from the flower-bud.
84. OLEUM CINNAMOMI. Distilled from the bark.
91. OLEUM COPAIBÆ. Distilled from the Oleo-resin.
91. OLEUM CORIANDRI. Distilled from the fruit.
94. OLEUM CROTONIS. Expressed from the seeds.
95. OLEUM CUBEBÆ. Distilled from the unripe fruit.
145. OLEUM JUNIPERI. Distilled from the unripe fruit.
149. OLEUM LAVANDULÆ. Distilled from the flowers.
151. OLEUM LIMONIS. Expressed or distilled from the fresh peel.
152. OLEUM LINI. Expressed from the seeds without heat.
163. OLEUM MENTHÆ PIPERITÆ. Distilled from the fresh herb.
164. OLEUM MENTHÆ VIRIDIS. Distilled from the fresh herb.
168. OLEUM MORRHUÆ. Extracted from the fresh liver by heat.
170. OLEUM MYRISTICÆ. Distilled from the seed kernel.
170. OLEUM MYRISTICÆ EXPRESSUM. Expressed from the seed with heat.
173. OLEUM OLIVÆ. Expressed from the ripe fruit and imported.
185. OLEUM PIMENTÆ. Distilled from the unripe berry.
210. OLEUM RICINI. Expressed from the seeds and imported.
212. OLEUM ROSMARINI. Distilled from the flowering tops.
213. OLEUM RUTÆ. Distilled from the fresh leaves and fruit.
214. OLEUM SABINÆ. Distilled from fresh Savin.
226. OLEUM SINAPIS. Distilled with water from the seeds of Black Mustard after the expression of the fixed oil.
247. OLEUM TEREBINTHINÆ. Distilled from Turpentine and imported
248. OLEUM THEOBROMÆ. Expressed with heat from seeds of *Theobroma Cacao.*

OLIVÆ OLEUM.

OLIVE OIL.

The Oil expressed in the south of Europe from the ripe fruit of the *Olea Europæa.*

Sp. g. 0·9153; congeals partially at about 36°.

Solubility: in Ether, 1 in 2; partially in Rectified Spirit.

(In all the Pharmacopœias.)

Medicinal Properties.

Nutritious and mildly laxative. Internally, as a demulcent, in the form of emulsion. Used in laxative enemata. It is most extensively used in pharmacy, in liniments, ointments, and plasters.

Dose.—½ to 1 oz.

Contained in Linimentum Ammoniæ, Linimentum Calcis, Linimentum Camphoræ, Cataplasma Lini, Emplastra and Unguenta.

OPIUM.

OPIUM.

The juice inspissated by spontaneous evaporation, obtained by incision from the unripe capsules of the *Papaver somniferum*, grown in Asia Minor.

Opium is derived almost exclusively from the *Papaver somniferum*. This plant was cultivated by the early Greeks, and is at present grown for its Opium, in India, Persia, Egypt, and Asiatic Turkey. In France and Germany, it is cultivated more for the sake of its seed, and in England for its capsules. The process of wounding the capsules and collecting the Opium has continued the same for the last 1800 years.* Smyrna Opium, and also that of Constantinople, is employed in this country. Specimens of Persian Opium in fingers, of Patna in squares, of Benares in balls covered with skin, and Egyptian in flat pieces like that of Constantinople, are to be found in several museums. Good Smyrna Opium yields, according to Mulder, from 9 to 11 per cent. of Morphia, together with Codeia, Narcotina, Papaverin, Paramorphia (Thebaica), Narcein, Meconin, Meconic Acid, Opianine, besides extractive and fatty matters.

MORPHIA.—Discovered by Sertuener. Crystallizes in nearly white flat, six-sided prisms, alkaline in reaction, soluble in Alcohol, *soluble, without decomposition, in solution of Potash*, insoluble in Water or Ether, forming crystallizable salts with acids. It is coloured intensely yellow by Nitric Acid, and blue by Perchloride of Iron. Intensely bitter.

CODEIA.—Discovered by Robiquet, in 1832. It crystallizes in white octahedrons, alkaline in reaction. Soluble in Water, Ether, and Alcohol; *insoluble in solution of Potash*. It does not become red with Nitric Acid, nor blue with Persalts of Iron. It exists in Opium, combined with Meconic Acid, like Morphia, and in the preparation of the Muriate of Morphia is extracted with it. From the mixed solution, Morphia is thrown down by Ammonia, when the Codeia is left in solution, and may be obtained by evaporation; it is redissolved in hot Ether, which on evaporation leaves the Codeia. It forms crystalline salts with acids. It has been said that its therapeutic action is like that of Morphia. Dr. Gregory took 3 grains without any effect, and he found that it required a dose of 4 to 6 grains to produce sensible effects; but it did not procure sleep.

NARCOTINA.—First noticed by Derosne, in 1803. In thin pearly tables. It is neutral. Insoluble in Water; soluble in Ether, in boiling Alcohol, in dilute acids; *insoluble in solution of Potash*. Forms a yellow solution with Nitric Acid and a blue one with Perchloride of Iron. It has no narcotic properties, and has therefore been called Anarcotina; it has been given in 5-grain doses as a substitute for Quinia.

PAPAVERIN.—Discovered by Dr. Merck. In white crystalline needles. Insoluble in Water; sparingly soluble in Alcohol and Ether. Moistened with strong Sulphuric Acid, it becomes dark blue.

PARAMORPHIA (Thebaica),—discovered by Pelletier. In white crystalline needles. Soluble in water, in Alcohol, 1 in 10, and in Ether. Unites

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* An interesting account of this process is given by Mr. Maltass, in the 'Pharmaceutical Journal,' March, 1864.

with acids. Not reddened by Nitric Acid, nor rendered blue by Persalts of Iron. In doses of 1 grain it produces tetanic spasms.

NARCEIN.—Discovered by Pelletier, in 1832. In white, silky, acicular crystals: neutral, with a slightly bitter taste. Soluble in 375 parts of cold and in 220 of hot Water, also in Alcohol; insoluble in Ether. It forms a bluish colour with Iodine, which is destroyed by heat; but it is not reddened by Nitric Acid. The dilute mineral acids impart to this substance a fine light blue colour, which disappears on the further addition of water. It is supposed to be inert.

MECONIN was discovered by Couerbe. It forms white acicular crystals, is a neutral body, and dissolves in 265 parts of cold and in 18 of boiling Water. Very soluble in Ether, Alcohol, and the essential oils.

MECONIC ACID.—In white, crystalline, pearly scales. Soluble in 4 parts of boiling Water, also in cold Water and Alcohol. Persalts of Iron render it blood-red. The salts of Lead, Silver, and Barium give white precipitates, which are soluble in Nitric Acid. Therapeutically, Meconic Acid has of itself little or no action on the system, but combined with Morphia, it forms the natural salt of Opium, and has a more calming effect than any of the artificial salts of Morphia.

OPIANINE, or OPIANIC ACID.—Discovered by Dr. Hinterberger. Occurs in long, colourless, prismatic crystals. Insoluble in Water, and sparingly soluble in boiling Alcohol, from which it entirely separates on cooling. Strong Sulphuric Acid dissolves without changing it; Nitric Acid colours it yellow, and if added to its Sulphuric Acid solution, blood-red. It contains no Nitrogen.

Spurious Opium has from time to time found its way into the market; and some very similar in external appearance to the best opium having been found on analysis to contain very little Morphia, the British Pharmacopœia has very properly given the following test:—

Test.—Take of Opium 100 grains; Slaked Lime, 100 grains; Distilled Water, 4 ounces. Break down the Opium, and steep it in an ounce of the water for twenty-four hours, stirring the mixture frequently. Transfer it to a displacement apparatus and pour on the remainder of the water in successive portions, so as to exhaust the Opium by percolation. To the infusion thus obtained, placed in a flask, add the Lime; boil for ten minutes, place the undissolved matter on a filter, and wash it with an ounce of boiling water. Acidulate the filtered fluid slightly with dilute Hydrochloric Acid; evaporate it to the bulk of half an ounce, and let it cool. Neutralize cautiously with Solution of Ammonia, carefully avoiding an excess; remove by filtration the brown matter which separates, wash it with an ounce of hot water; mix the washings with the filtrate; concentrate the whole to the bulk of half an ounce, and add now Solution of Ammonia in slight excess. After twenty-four hours collect the precipitated Morphia on a weighed filter, wash it with cold water and dry it at 212° F. It ought to weigh at least from 6 to 8 grains, and is pure Morphia.

Thus 1 grain of Opium yields $\frac{1}{12}$ grain of Morphia.

The French Pharmacopœia states that soft Smyrna Opium should contain 10 per cent., and hard, 11 or 12 per cent. of Morphia.

14 of good Smyrna fresh from the chest when dried weigh 12, and the extract from it weighs 7.

INCOMPATIBLES.—The Alkaline Carbonates, Lime Water, Salts of Lead, Iron, Copper, Mercury, and Zinc, Liquor Arsenicalis, and all astringent Vegetables.

ANTIDOTES.—In case of poisoning by Opium, the antidotes are an emetic of 10 grs. of Sulphate of Copper, the stomach pump, external stimulants, cold effusion, Ammonia to the nostrils, compelled exertion, and artificial respiration.

Medicinal Properties.

Opium has three main physiological effects:—It diminishes pain (insensibility). It causes sleep. It arrests secretion, excepting that of the skin, which it promotes.

In small doses it excites the vascular and nervous systems, increasing the rapidity and fulness of the pulse; this is followed by sleep, accompanied with perspiration. It is apt to produce nausea, headache, thirst, and constipation. If the dose be large, the sleepiness becomes intense, and there is difficulty in waking the patient. By continued use, it impairs the appetite and digestion. It also acts on the respiratory system, diminishing the frequency of respirations, and thus impairing the oxidization of the blood.

Dose.—Of the powder, ½ to 2 grs. = $\frac{1}{16}$ to ¼ Hydrochlorate of Morphia.

When *small* pills of Opium are desired, 25 grains of powdered Opium with 1 minim of Syrup and 1 minim of water will form a nice pill-mass.

Preparations.

CONFECTIO.

Compound Powder of Opium, 192 grs.; Syrup 1 oz.
=(1 of Powder of Opium, 40).

A new preparation.

Dose.—5 to 20 grs.

EMPLASTRUM.

Opium in very fine powder, 1; Resin Plaster, 9: melt the Resin Plaster by steam or water bath, add the Opium by degrees, and mix thoroughly.
=(1 in 10).

Anodyne, to relieve local pain.

(Same as Brit. 1864, and Dub. 1 in 10; Lond. Extract, 1 in 12; Edin. 1 in 31; U.S. Extract, 1 in 16; Belg. 1 in 20; Pr. 1 in 8; not in others.)

ENEMA.

Tincture of Opium, ½ drm.; Mucilage of Starch, 2 oz.: mix for one enema.
(Same as Brit. 1864, Edin. and Lond.; not in others.)

EXTRACTUM.

Opium in thin slices, 1 lb.; Distilled Water, 6 pints; macerate the Opium in 2 pints of the Water twenty-four hours, and express the liquor. Reduce the residue of the Opium to a uniform pulp, macerate it again in 2 pints of the Water for twenty-four hours, and express. Repeat the operation a third time. Mix the liquors, strain through flannel, and evaporate by a water-bath to a proper consistence for forming pills.

This is less stimulating than powdered Opium, and is preferred as a direct sedative.

100 of good Opium yields 50 of extract.

(In all the Pharmacopœias; Pr. reduced to powder, maximum dose 2 grs.)

Dose.—½ to 1 gr. or more.

EXTRACTUM LIQUIDUM.

Extract of Opium, 1; Distilled Water, 16; Rectified Spirit, 4: digest the Extract of Opium in the Water for an hour, stirring frequently; filter, and add the Spirit. The product should measure 20.

=(1 Ext. in 20=1 Powder of Opium in $11\frac{2}{3}$).

(Same as Brit. 1864; same strength as the Wine, and about one-seventh part stronger than the Tincture.)

Dose.—10 to 30 minims.

Produces the effects of Opium, but with less derangement of the nervous system.

LINIMENTUM.

Tincture of Opium, 1; Liniment of Soap, 1: mix. =(1 in 2).

The addition of the Opium to the Soap Liniment renders it more useful in many cases of rheumatism and local pains.

(Same as Brit. 1864; same strength as Dub. Edin.; Lond. Tincture of Opium, 1 in 4; not in others.)

PILULA SAPONIS COMPOSITA.

Opium in fine powder, 1; Hard Soap, 4; Distilled Water, a sufficiency: reduce the Soap to powder, triturate it with the Opium, and add Water sufficient to make a pill mass. =(1 Powder of Opium in 6, nearly).

Nearly 6 grains contain 1 grain of Powder of Opium.

Anodyne and soporific.

(Same as Lond. Dub. and U. S.; Brit. 1864 and Edin. Pil. Opii, 1 in 5; U.S. 5 in 6; Belg. Pil. Comp. 1 in 100; not in others.)

Dose.—3 to 6 grs.

PULVIS COMPOSITUS.

Opium in powder, 3; Black Pepper, 4; Ginger, 10; Caraway, 12; Tragacanth, 1: mix. (The dry ingredients for making Confectio Opii.)

=(1 of Powder of Opium in 10).

Dose.—2 to 5 grs.

A new preparation.

TINCTURA.

Opium in coarse powder, $1\frac{1}{2}$; Proof Spirit, 20: macerate seven days, strain, express, filter, and add spirit to make 20. =(1 in $13\frac{1}{3}$).

$13\frac{1}{3}$ minims=1 grain Powder of Opium.

A valuable anodyne and soporific, preferred to solid Opium when a more immediate effect is required.

(Same as Brit. 1864, Lond. Edin. and Dub.; U.S. 1 in 12; (Austr. 1 in 6; Belg. and Fr. with Extract, 1 in 12; Pr. 1 in 10 by weight). Fr. has also the Brit. Ph. formula.)

Dose.—10 to 30 minims.

TINCTURA OPII AMMONIATA.

Opium in powder, 100 grs.; Saffron, cut small, 180 grs.; Benzoic Acid, 180 grs.; Oil of Anise, 60 mins.; Strong Solution of Ammonia, 4 oz.; Rectified Spirit, 16 oz.: macerate seven days in a closed vessel, with occasional agitation, strain, and add sufficient Rectified Spirit to make up 20.

=(1 Powdered Opium in 96 minims).

Dose.—$\frac{1}{2}$ to 1 drm.

THE SCOTCH PAREGORIC.—The Caustic Ammonia keeps the Morphia of the Opium in solution; the Carbonate of Ammonia would precipitate it.

TROCHISCI.

Extract of Opium, 72 grs.; Tincture of Tolu, ½ oz.; Refined Sugar in powder, 16 oz.; Gum Arabic in powder, 2 oz.; Extract of Liquorice, 6 oz.; Distilled Water, a sufficiency: divide the mass into 720 lozenges.

Each lozenge contains $\frac{1}{10}$ gr. of Extract of Opium.

(Same as Brit. 1864; Edin.; U.S. Opium with Liquorice; not in others.)

Dose.—1 or 2 lozenges.

VINUM.

Extract of Opium, 1 oz.; Cinnamon Bark, 75 grs.; Cloves, 75 grs.; Sherry Wine, 20 oz.: macerate for seven days and filter.

=(1 gr. Extract in 20 minims=1 Powder of Opium in 11⅔ minims).

Dose.—10 to 40 minims.

This is ¼ stronger than Vinum Opii, Brit. 1864, and also of the Edin. and Dub., and is about ⅕ weaker than Vin. Opii, Lond.; is stronger than Tinct. Opii, but is of the same strength as Extractum Opii Liquidum. If the Committee could but have left this preparation alone, and have made the Extractum Opii Liquidum of the same strength as the Vinum was, we should have had the Liquid Extract, the Tincture, and the Wine all of one strength, and the latter without the Aromatics. We must now keep the Brit. 1864 for the use of oculists, who object strongly to the Aromatics. The formula of the Brit. 1864 is as follows:—

Opium in powder, 1½; Sherry, 20: macerate seven days, and filter.

=(1 powder in 13⅓).

(Lond. Edin. Fr. and U.S. with aromatics; Belg. both with and without aromatics; not in others.)

Dose.—10 to 40 minims.

	Other preparations containing Opium.	Proportions of Opium in the mass.
Page 143.	PILULA IPECACUANHÆ CUM SCILLA	1 in 16½.
187.	PILULA PLUMBI CUM OPIO	1 in 8.
177.	PILULA SAPONIS COMPOSITA	1 in 6, nearly.
94.	PULVIS CRETÆ AROMATICUS CUM OPIO . .	1 in 40.
143.	PULVIS IPECACUANHÆ COMPOSITUS	1 in 10.
146.	PULVIS KINO COMPOSITUS	1 in 20.
63.	TINCTURA CAMPHORÆ COMPOSITUS	¼ gr. in drm. or 1 in 240.
123.	UNGUENTUM GALLÆ CUM OPIO	1 in 14⅔.
166.	MORPHIÆ ACETAS LIQUOR	4 grs. in 1 oz. or 1 in 123.
167.	MORPHIÆ HYDROCHLORAS LIQUOR	4 grs. in 1 oz. or 1 in 123.

Not Officinal.

AQUA OPII.—Dried Opium, 1; Water, 12: distil 6.

Employed in eye lotions where spirit is objectionable. Aq. Opii, 1; Aq. Sambuci, 7.

UNGUENTUM OPII.—Soft Extract of Opium, 1; Simple Ointment, 9: mix.

=(1 in 10).

SOLUTION OF BIMECONATE OF MORPHIA.—Same strength and same dose as of Tincture of Opium. This was introduced into medicine by the Author in 1839; possesses in an eminent degree the sedative powers of Morphia. Dr. Roots thus writes of it:—"I have taken it myself daily now very nearly four years, and during that period I have frequently prescribed it in my private practice. The result of my observations on its effects on myself and others amounts to this, namely, that it disturbs the head less, that it distresses the stomach less, and that it constipates the bowels less, than any

other preparation of opium. I have taken every other preparation of Opium, but from none of them have I obtained the same degree of quiet rest that I have enjoyed from this Bimeconate of Morphia."

For Hypodermic injection, it is evaporated to one-twentieth of its volume, and then 3 minims are equal in power to ½ grain of Acetate of Morphia.

Liquor Sedativus (Battley) has enjoyed a reputation for a long time as an anodyne and sedative superior to Tincture of Opium, but it is somewhat stronger, say 50 per cent.; the dose is therefore 10 to 20 minims.

Sydenham's Laudanum.—A vinous preparation of Opium (Pr. Tinct. Opii Crocata). 8 minims are equal to 1 grain of Opium.

Dose.—10 to 20 minims.

Black Drop.—Originally prepared by John Cook, of Manchester. 1 drop is equal to 4 drops of Tincture of Opium.

Dose.—4 to 8 minims.

Jeremie's Laudanum.—Prepared by Savory and Moore. The same dose as Battley's.

Nepenthe.—Prepared by Ferris, of Bristol. Same dose as Tincture of Opium.

Tinctura Thebaica.—Extract of Opium, 4; Proof Spirit, 38 by weight: macerate and filter. In doses from 6 to 10 minims.

Syrupus Codeiæ.—Codeia, 6 grs.; Water, ½ oz.; Syrup, 8 oz.: triturate the Codeia with the water, add the Syrup and heat until solution takes place.

Used for cough.

Dose.—1 to 2 teaspoonfuls.

Syrupus Morphiæ. *Dub.*—Liquoris Morphiæ Hydrochloratis, 1 oz.; Syrupi Simplicis, 17 oz.

Each fluid ounce contains ¼ grain of the Salt.

Dose.—1 to 2 drms.

OS USTUM.

BONE ASH.

The residue of bones which have burnt to a white ash in contact with air.

Used to prepare Calcis Phosphas and Sodæ Phosphas.

OVI VITELLUS.

YOLK OF EGG.

The yolk of the egg of *Gallus Bankiva*.

Contained in Mistura Spiritus Vini Gallici.

OXYMEL.—*See* MEL.

OXYMEL SCILLÆ.—*See* SCILLA.

Not Officinal.

PANCREATIC JUICE.

Dr. Lucien Corvisart made some careful and elaborate experiments with this substance, and published them in 1857; his conclusions were that Pepsine must be *acid*, and that Pancreatic Juice must be *alkaline*, to digest food. He also showed that the two substances, digested together, destroyed the properties of both.

The Author introduced the Pancreatine in the solid form eight or ten years ago, but failing to find some envelope which would take it through the stomach into the Pancreas, its use was abandoned. If Corvisart's conclusions are correct, to introduce it into the stomach would doubtless do harm to the digestive power of the stomach.

Dr. Dobell, on the other hand, contends that the natural state of the Pancreatic Juice is acid. Between these conflicting opinions, founded on experiments, no doubt made with great care by both of these talented physiologists, it would be highly desirable to have a third, from a well-known careful observer.

PAPAVERIS CAPSULÆ.

POPPY CAPSULES.

The nearly ripe capsules of the White Poppy, *Papaver somniferum*, dried and deprived of the seeds; cultivated in Britain.

Medicinal Properties.

Similar to Opium, but weaker and of uncertain strength.

(In all the Pharmacopœias; Fr. Pavot.)

Preparations.

DECOCTUM.

Poppy Capsules, bruised, free from seeds, 1; Distilled Water, 15: boil ten minutes and strain; product should be 10. =(1 in 10).

(Brit. 1864; Edin. and Dub. same strength, but with seeds; Lond. weaker; Belg. 1 in 20; not in Austr. and Pr.)

An external soothing application, applied warm.

EXTRACTUM.

Capsules, coarsely powdered, 16; Rectified Spirit, 2; Distilled Water, a sufficiency: mix the Poppy Capsules with 40 of the water, stirring them frequently during twenty-four hours, then pack in a percolator and pass water slowly through them until about 160 have passed through. Evaporate the liquor by a water-bath to 20; when cold, add the spirit. After twenty-four hours, filter the liquor and evaporate to a pilular consistence.

(Same as Lond. and Edin.)

Dose.—2 to 5 grs.

SYRUPUS.

Poppy Capsules, coarsely powdered, free from seed, 36; Rectified Spirit, 16; Refined Sugar, 64; boiling Distilled Water, a sufficiency: macerate the Poppy Capsules in 80 of the water. Infuse for twenty-four hours, then pack in a percolator, and adding more of the water, allow the liquor slowly to pass until 320 have been collected or the Poppies are exhausted; evaporate the liquor by a water-bath until it is reduced to 60; when quite cold, add the spirit, let the mixture stand for twelve hours and filter. Distil off the spirit, evaporate the remaining liquor to 40, and then add the sugar; the product should weigh 104, and measure 78$\frac{3}{4}$, and should have the sp. g. 1·320. =(1 in nearly 2$\frac{1}{4}$).

(Brit. 1864; about the same as Lond. and Edin.; Austr. with infusion and weaker; Belg. with alcoholic *extract* and simple syrup, 1 in 100; Fr. Sirop Diacode, 1 of extract of Opium in 2000; not in others.)

Dose.—1 drm.; 10 to 20 minims for children, increasing cautiously in consequence of their susceptibility to the influence of Opium.

In the Edinburgh formula no spirit was ordered. In Lond. the same amount of spirit as in the British, but to be added at the end of the process, and was useless. In the new process it is added to the cooled decoction, and thus coagulates the albuminous matters; the filtered liquor now being made into a syrup with the sugar, will be preserved from fermentation even in hot weather.

Not Officinal.

EXTRACTUM LIQUIDUM.—The liquid obtained by the process for making the syrup (previous to adding the Sugar), 3; Rectified Spirit, 1: mix.

Dose.—30 to 60 minims.

PAREIRÆ RADIX.

PAREIRA ROOT.

The dried root of the *Cissampelos Pareiræ*, from Brazil.

A good deal of the stem, which closely resembles the root, is imported, and is said to be much less efficacious. The root itself has frequently filiform rootlets attached to it.

(Brit. 1864; Lond. Edin. Dub. U.S. Fr.; not in others.)

Medicinal Properties.

Tonic, aperient, and diuretic. In calculous affections, chronic inflammation, and ulceration of the kidneys and bladder: strongly recommended by the late Sir B. Brodie for its action on the mucous membrane of the bladder.

Dose.—Of the powder, 30 to 60 grs.

Best prescribed with Opium.

Preparations.

DECOCTUM.

Pareira, sliced, $1\frac{1}{2}$; Distilled Water, 20: boil fifteen minutes and strain; the product should measure 20. =(1 in $13\frac{1}{3}$).

(Same as Brit. 1864, Lond.; not in others.)

Dose.—1 to 2 oz. three or four times a day.

EXTRACTUM.

Pareira Root, in coarse powder, 1; boiling Distilled Water, 10 or a sufficiency: digest the Pareira with $1\frac{1}{2}$ of water for twenty-four hours, then pack in a percolator, and add water, till, by slow percolation, 10 has passed through. Evaporate by a water-bath to a pilular consistence.

Dose.—10 to 20 grs.

The *solid* extract was in Lond. and Edin., and is sixteen times stronger than the liquid extract. It was usually ordered with the decoction, to increase its power.

EXTRACTUM LIQUIDUM.

Pareira, in coarse powder, 16; boiling Distilled Water, 160, or a sufficiency; Rectified Spirit, 3: macerate in 20 of water for twenty-four hours, pack in a percolator, adding more of the water, allow the liquor slowly to

pass, until 160 has been collected, or the Pareira is exhausted, evaporate to 13, and when cold add the spirit, filter, and make up to 16. =(1 in 1).

(Brit. 1864.)

Dose.—½ to 2 drms.

INCOMPATIBLES.—The Persalts of Iron, Salts of Lead, Tinct. of Iodine.

Not Officinal.

PEPSINE DE BOUDAULT.

The gastrice juice obtained from the stomachs of the hog, sheep, or calf, killed fasting; purified, dried, and mixed with dry starch. No. 1 is prepared with Lactic Acid because pepsine acts best when acid is present, but it is also prepared in a neutral state to be administered when there is an excess of acid in the stomach already. There is great diversity in the strength of Pepsine made by different chemists.

Medicinal Properties.—Administered in all cases where there is a deficiency of gastric juice. Largely given in atonic dyspepsia, sickness in pregnancy, etc.

Dose.—15 grs. before each meal, in powder, or suspended in soup or syrup; also in the form of Pepsine Wine, dose a teaspoonful; also Pepsine Lozenges, 2 for a dose, and Pills.

The *Pepsina Porci* (Bullock) is said to be five times stronger than that made by Boudault, and should be given in doses of 2 to 4 grs., but if not carefully kept is apt to acquire an unpleasant odour.

4 grs. makes a nice pill with 2 minims of Glycerine.

Boudault's Pepsine was introduced into Britain by the Author in 1855, and has ever since kept its place amongst the valuable therapeutical remedies for indigestion.

The International Jury at the French Exhibition, 1867, has signified its approval, by awarding a medal for this preparation.

Not Officinal.

PETROLEUM ETHER, mentioned at page 20, is HYDRIDE OF AMYL ($C_{10}H_{12}$, or C_5H_{12}), sp. g. ·628, boils at 86° F., containing a variable quantity of PETRYL (BUTYL) HYDRIDE, which boils at 32°, and in the liquid form has a sp. g. ·600.

PHOSPHORUS.

A NON-METALLIC ELEMENT OBTAINED FROM BONES.

A semi-transparent colourless wax-like solid, which emits white vapours when exposed to the air.

Sp. g. 1·770. Melts at 110°, and ignites in the air.

Solubility: in Ether, in Olive Oil, and boiling Oil of Turpentine; insoluble in water.

Used for making Acidum Phosphoricum Dilutum.

Dr. Radcliffe strongly advocates the use of Phosphorus with Cod-liver Oil, or some oily or fatty matter, in many cases where an indication of treatment is to improve nerve tone or to repair nerve tissue. Phosphorus and fat are important ingredients in nerve tissue, and he gives them in the cases which have been indicated for the same reason as that which would lead to the use of Iron in many cases of anæmia. At first he used the Phosphorated Oil of the Prussian Pharmacopœia, or the Phosphorated Ether of the French Codex, but lately he has preferred to either of these nauseous preparations a pill made by melting Phosphorus in prepared suet in a closed vessel, and coating it with gelatine; the amount of Phosphorus in each

three-grain pill being $\frac{1}{30}$ of a grain. Dr. Radcliffe also speaks highly of the Hypophosphites, of Soda especially, as elegant and effectual means of giving Phosphorus; and as a reason for supposing that the Phosphorus of these preparations may be readily got at in the system, he points to the fact that this element is so loosely combined as to ignite at once when the Hypophosphite is brought near a flame, a result which does not happen when a phosphate is so treated.

PHYSOSTIGMATIS FABA.

CALABAR BEAN.

The seed of *Physostigma venenosum*, Western Africa, about twice the size of a horse-bean, with a very firm, hard, brittle, shining integument, of a brownish-red colour, irregularly kidney-shaped.

It yields its virtues to Alcohol, and imperfectly to water.

Dose.—In powder, 1 to 4 grs.

EXTRACTUM.

Calabar Bean, in coarse powder, 1; Rectified Spirit, 5: macerate the bean for 48 hours in one-fourth of the spirit in a closed vessel, agitating occasionally, then transfer to a percolator, and when the fluid ceases to pass, add the remainder of the spirit, so that it may slowly percolate through the powder, subject the residue of the bean to pressure, adding the pressed liquid to the product of the percolation, distil off most of the spirit, and evaporate what is left in the retort by a water-bath, to the consistence of a soft extract.

Dose.—$\frac{1}{16}$ to $\frac{1}{4}$ gr.

A new preparation.

PILULÆ.

PILLS.

This class of medicines, so convenient and portable, was introduced in the earliest Pharmacopœias, and some of them remain unchanged to the present day. We may mention the Pilula Rufi, which has for at least two hundred years maintained the same proportions, and is now called Pil. Aloes et Myrrhæ. Pills have been rolled in flour, starch, magnesia, liquorice powder, and on the Continent in lycopodium; also, enveloped in silver leaf, and more recently coated with egg-albumen and Ethereal Solution of Tolu for the purpose of preventing them from becoming dry and hard, as well as to shield them from the palate, and so to prevent their being tasted. When pills are intended to pass through the stomach, as in the case of Aloes, so as to act entirely on the lower bowels, they are made up with Alcohol, and varnished with an ethereal solution of Tolu.

The Pills of former Pharmacopœias omitted from the British, are:—Pilula Aloes Composita, Lond. and Dub.; Calomelanos et Opii, Edin.; Cupri Ammoniati, Edin.; Digitalis et Scillæ, Edin.; Ferri Composita, Lond.; Ferri Sulphatis, Edin.; Ipecacuanhæ et Opii, Edin.; Opii sive Thebaicæ, Edin.; Rhei, Edin.; Rhei et Ferri, Edin.; Styracis Composita, Lond. Edin.

Pilula Aloes is now to be ordered as Pil. Aloes Barbadensis or Pil. Aloes Socotrina; Pil. Aloes cum Sapone, Lond., is replaced by Pil. Aloes Barb.,

but the ingredients vary in proportions; Pil. Assafœtidæ, Edin. Dub., is now Pil. Assafœtidæ Comp.; Pil. Galbani, Lond., is represented by Pil. Assafœtidæ Comp., with varied proportions; Pil. Plumbi Opiata, Edin., now Pil. Plumbi cum Opio.

Pilula Ferri Iodidi and Pilula Quiniæ are new preparations.

The following are now contained in the British Pharmacopœia, the formulæ for which will be found under the names of the substances from which they are prepared.

Page.		Proportion of active ingredients in the mass.
21.	PILULA ALOES BARBADENSIS	1 in 2.
22.	PILULA ALOES ET ASSAFŒTIDÆ	Aloes 1, Ass. 1 in 4.
21.	PILULA ALOES ET FERRI	Aloes 1, Iron $\frac{3}{4}$ in $5\frac{1}{4}$.
22.	PILULA ALOES ET MYRRHÆ	Aloes 1, Myrrh $\frac{1}{2}$ in 3.
22.	PILULA ALOES SOCOTRINÆ	1 in 2.
43.	PILULA ASSAFŒTIDÆ COMPOSITA	Ass. 1, Galb. 1 in $3\frac{1}{2}$.
61.	PILULA CAMBOGIÆ COMPOSITA	about 1 in 6.
88.	PILULA COLOCYNTHIDIS COMPOSITA.	Col. 1, Aloes 2, Scam. 2 in 6.
88.	PILULA COLOCYNTHIDIS ET HYOSCYAMI.	Pil. Col. Co. 2, Ext. Hyos. 1 } in 3.
89.	PILULA CONII COMPOSITA	Ext. $2\frac{1}{2}$, Ipec. $\frac{1}{2}$ in 3.
109.	PILULA FERRI CARBONATIS	Saccharo-Carbonate 1 in $1\frac{1}{4}$.
112.	PILULA FERRI IODIDI	Iodide of Iron 1 in 3.
131.	PILULA HYDRARGYRI	Mercury, 1 in 3.
137.	PILULA HYDRARG. SUBCHLORIDI COMPOSITA.	1 Calomel in 5.
143.	PILULA IPECACUANHÆ CUM SCILLA	3 Dover's Powder in 6.
187.	PILULA PLUMBI CUM OPIO	Acet. Lead 6, Opium 1 in 8.
206.	PILULA QUINIÆ	3 Quinine in 4.
209.	PILULA RHEI COMPOSITA	Rhubarb 1, Aloes $\frac{3}{4}$ in $4\frac{1}{2}$.
177.	PILULA SAPONIS COMPOSITA	1 Opium in 5.
221.	PILULA SCILLÆ COMPOSITA	Squills 1 in 5.

N.B.—The dose of all pills should be from 4 or 5 grains to 10 grains, unless otherwise directed.

PIMENTA.

PIMENTO.

The dried unripe berries of the Allspice-tree, *Eugenia Pimenta*, from the West Indies.

Medicinal Properties.

A warm aromatic stimulant, like Cloves; used as an adjuvant to tonics and purgatives.

Dose.—10 to 30 grs. in powder.

(Brit. 1864, Lond. Edin. Dub. Belg. Fr. Piment de la Jamaïque; not in others.

Contained in Syrupus Rhamni.

Preparations.

AQUA.

Pimento, bruised, 1; Water, 23 nearly: distil one-half. =(1 in 11½).

(Same as Brit. 1864, 14 oz. and 2 galls.; distil 1 gall. =1 in 11½; Lond. and Edin. 1 and 20, distil 10=1 in 10; Dub. and Belg. made with essence; not in others.)

Dose.—1 to 2 oz.

OLEUM.

The Oil distilled in Britain from Pimento. Sp. g. 1·021.

(Brit. 1864, Lond. Belg. U.S.; not in others.)

Dose.—1 to 3 minims, on Sugar, in pill, or emulsion.

PIPER.

BLACK PEPPER.

The dried unripe berries of the *Piper nigrum*, chiefly from the East Indies.

Medicinal Properties.

A warm carminative stimulant, producing general arterial excitement. Chiefly used to excite the languid stomach and correct flatulence. Acts on the mucous membrane of the rectum, whence it is useful in hæmorrhoids; also on the membrane of the urethra, similarly to Cubebs. In intermittents, it may be used as an adjuvant to more powerful febrifuges, when the stomach is not acted upon by Quinia, as with drunkards.

Dose.—5 to 20 grs. in powder.

(In all the Pharmacopœias except Pr.; Fr. Poivre Noir.)

Contained in Confectio Opii and Pulvis Opii Compositus.

Preparation.

CONFECTIO.

Black Pepper, in fine powder, 2; Caraway, in fine powder, 3; Clarified Honey, 15: triturate. =(1 in 10).

(Same as Brit. 1864, 1 of Pepper in 10; Lond. and Edin. 1 in 9; Dub. 1 in 8; Lond. with Elecampane; Edin. and Dub. with Liquorice and Fennel; not in others.)

Dose.—60 to 120 grs.

PIX BURGUNDICA.

BURGUNDY PITCH.

A resinous exudation from the stem of the Spruce Fir, *Abies excelsa*, melted and strained; imported from Switzerland.

(Brit. 1864, Lond. Edin. and Dub.; Belg. Pix Alba; Fr. Poix de Bourgogne; Pr. Resina Pini Burgundica; not in others.)

It is the Thus or Frankincense of Lond. and Dub. which exudes, and when melted and strained is called Burgundy Pitch.

Preparations.

EMPLASTRUM PICIS.

Burgundy Pitch, 26; Common Frankincense (Thus Americanum), 13;

Resin, 4½; Yellow Wax, 4½; Expressed Oil of Nutmegs, 1; Olive Oil, 2; Water, 2: add the Oil and the Water to the other ingredients, previously melted together; stir, and evaporate to a proper consistence.

Applied to the chest in chronic pulmonary complaints, to the loins in lumbago, to the joints in chronic articular affections, and to other parts to relieve local pains of a rheumatic character. It acts as a counter-irritant.

(Same as Brit. 1864 and Lond.; Edin. contains 50 per cent. more Pitch; U. S. Wax 1, Pitch 12; Belg. Oil 1, Wax 3, Pitch 16; Fr. Wax 1, Pitch 3; not in others.)

PIX LIQUIDA.

TAR.

A bituminous liquid obtained from the wood of *Pinus sylvestris* and other Pines by destructive distillation.

Medicinal Properties.

Similar to Turpentine. May be used internally in chronic catarrhal affections, and complaints of the urinary passages; also for some chronic skin diseases. Inhaled, the vapour is useful in chronic bronchitis. Also as an external application in cases of lepra, etc.

(In all the Pharmacopœias; Fr. Goudron Végétal, obtained from *Pinus maritima*.)

Dose.—20 to 60 minims, in pills with flour.

Preparations.

UNGUENTUM.

Tar, 5; Yellow Wax, 2: melt together and stir till cold. Applied in cases of psoriasis, lepra, and scald-head.

(Same as Edin. and Dub.; Lond. tar and suet equal weights; Fr. Pomade de Goudron, 1 in 4.)

Used to remove tetter and in tinea capitis.

Not Officinal.

Aqua (Tar Water).—Stir a pint of Tar with half a gallon of Water for fifteen minutes, and decant.

(Fr. Eau de Goudron, Tar, 1; Water, 30: digest eight or ten days.)

Dose.—From 1 to 2 pints daily, or may be used as a wash.

Pilulæ Picis.—Tar 2, Liquorice Powder 1; made into five-grain pills.

Dose.—2 or 3 pills thrice daily (Dr. Seymour).

They are sometimes made of Black Pitch, and taken to relieve hæmorrhoids.

Tar Capsules.

Dose.—2 capsules, three or four times a day, as a stimulant and diuretic.

PLASMA.—*See* GLYCERINUM AMYLI.

It will not blend with ointments made with lard, and if that fact is not constantly borne in mind by prescribers, both would be ordered in the same compound, to the annoyance of both dispenser and patient.

PLUMBUM.

LEAD.

Pb, eq. 103·5; or Pb, eq. 207.

Lead occurs in nature as an oxide, and as a sulphuret called *galena*, also in saline combination, forming the native sulphate, phosphate, carbonate, chromate, molybdate, tungstate, and arseniate of lead. The native oxide is rare, but galena, the ore from which nearly *all* the lead of commerce is extracted, is exceedingly abundant.

INCOMPATIBLES. } Are given after Plumbi Subacetatis Liquor, page 190.
ANTIDOTES. }

PLUMBI ACETAS.

ACETATE OF LEAD.

Syn. SUGAR OF LEAD.

$PbO,C_4H_3O_3+3HO$, eq. 189·5; or $Pb\,(C_2H_3O_2)_2.\,3H_2O$, eq. 379.

In white masses of interlaced acicular crystals, slightly efflorescent, having an acetous odour, and a sweet astringent taste.

Solubility: in Water, 10 in 25.

Litharge, in fine powder, 24; Acetic Acid, 40; Distilled Water, 20: mix the Acetic Acid and the water, add the Litharge, and dissolve with the aid of a gentle heat; filter, evaporate till a pellicle forms, and set aside to crystallize, adding a little Acetic Acid should the fluid not have a distinct acid reaction; drain and dry the crystals on filtering-paper, without heat.

Test.—Its solution in Distilled Water is clear, or is only slightly turbid, and becomes clear on the addition of Acetic Acid. 38 grains dissolved in water, require for complete precipitation 200 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

In small doses, it is sedative and astringent, lessening morbid mucous discharges and hæmorrhages, and even diminishing natural secretions; whence it is useful in chronic diarrhœa and dysentery. Used in phthisis to check expectoration; in bronchitis to abate profuse secretion. Its use requires caution. It is often followed with a small dose of Acetic Acid, under the idea that excess of Acid makes it less injurious to the system. Externally, it is sedative, desiccant, and astringent, diminishing profuse discharges of ulcers; also for injection in gonorrhœa.

(In all the Pharmacopœias; same as Brit. 1864, Lond. Edin. Dub. and U. S.; Austr. and Pr. Plumbum Aceticum Crudum; Belg. Acetas Plumbi Depuratus; Fr. Acétate de Plomb.)

Dose.—1 or 2 to 8 grs. in pill.

Preparation.

PILULA PLUMBI CUM OPIO.

Acetate of Lead, in fine powder, 6; Opium, in fine powder, 1; Confection of Roses, 1: mix.

(Same as Brit. 1864, Edin. and Fr.; not in others.)

A four-grain pill contains 3 grs. of Plumbi Acet. and ½ gr. Pulvis Opii.

Dose.—1 four-grain pill every three or four hours for hæmorrhage.

SUPPOSITORIA PLUMBI COMPOSITA.

Powder of Acetate of Lead, 36; Opium in Powder, 12; Benzoated Lard, 42; White Wax, 10; Oil of Theobroma, 80: melt the Wax and Oil of Theobroma with a gentle heat, then add the other ingredients previously rubbed together in a mortar, and having mixed them thoroughly, pour the mixture while it is fluid into suitable moulds of the capacity of 15 grains.

The above makes 12 suppositories.

Each suppository contains 3 grs. Acetate of Lead and 1 gr. Opium.

A new preparation.

UNGUENTUM.

Acetate of Lead in fine powder, 12 grs.; Benzoated Lard, 1 oz.: mix. =(1 in $37\frac{1}{2}$).

(Edin. 1 in 21; Dub. 1 in 17.)

Not Officinal.

Lotio Plumbi Acetatis.—2 grains to an ounce (Ophthalmic Hospital).

Pessaries.—Acetate of Lead $7\frac{1}{2}$, Oil of Theobroma sufficient for one pessary.
Acetate of Lead 5 grs., Opium in powder 2 grs., Oil of Theobroma sufficient for one pessary.

PLUMBI CARBONAS.

CARBONATE OF LEAD.

$2(PbO,CO_2)+HO,PbO$; eq. 387·5.

A soft, heavy, white powder.

Solubility: insoluble in water; soluble, with effervescence, in diluted Nitric Acid.

Test.—Dissolves in Acetic Acid without leaving any residue, and the solution, when treated with excess of Sulphuretted Hydrogen, boiled and filtered (all the Sulphuret of Lead separated), gives no precipitate with Oxalate of Ammonia—indicating absence of Lime.

Medicinal Properties.

Employed externally as an astringent and sedative, or as an ointment for ulcers and inflamed and excoriated surfaces.

(Same as Brit. 1864, Edin. Dub. and U. S.; Austr. Plumbum Carbonicum; Belg. Carbonas Plumbi Venale; Cerussa; Fr. Carbonate de Plomb; Pr. Plumbum Hydrico-carbonicum; not in Lond.)

Preparation.

UNGUENTUM.

Carbonate of Lead, in fine powder, 1; Simple Ointment, 7: mix thoroughly. =(1 in 8).

(Same as Brit. 1864; Edin. and Dub. 1 in 6; Belg. 1 in $6\frac{1}{3}$; U. S. 1 in 7; Pr. 1 in 3; not in others.)

PLUMBI IODIDUM.

IODIDE OF LEAD.

PbI, eq. 230·5; or PbI_2, eq. 461·0.

Nitrate of Lead, 4; Iodide of Potassium, 4; Distilled Water, a sufficiency: dissolve, with heat, the Nitrate of Lead in 30 of water, and the Iodide of Potassium in 10 of water; mix the solutions, collect the precipitate on a filter, wash it with Distilled Water, and dry it with a gentle heat.

EMPLASTRUM.

Iodide of Lead, 1; Soap Plaster, 4; Resin Plaster, 4: add the Iodide of Lead in fine powder to the plasters previously melted, and mix them intimately.

UNGUENTUM.

Iodide of Lead in fine powder, 62 grs.; Simple Ointment, 1 oz.: mix thoroughly. =(1 in 8).

Not Officinal.

PESSARY.—Iodide of Lead 5 grs., Oil of Theobroma sufficient for one pessary.

PLUMBI NITRAS.

NITRATE OF LEAD.

PbO,NO_5, eq. 165·5; or $Pb(NO_3)_2$. eq. 331.

Used to produce Plumbi Iodidum.

PLUMBI OXIDUM.

Syn. LYTHARGYRUM, 1864.

PbO, eq. 111·5; or PbO, eq. 223.

In heavy scales of a pale brick-red colour.

Soluble in diluted Nitric Acid and in Acetic Acid without effervescence. Its solution in diluted Nitric Acid when supersaturated with Ammonia and cleared by filtration does not exhibit a blue colour, indicating absence of Copper.

Medicinal Properties.

For external application only, to abate inflammation.

(In all the Pharmacopœias.)

Preparation.

EMPLASTRUM.

Oxide of Lead in very fine powder, 1; Olive Oil, $2\frac{1}{2}$; Water, 1: boil all the ingredients together gently by the heat of a steam-bath and keep them simmering for 4 or 5 hours, stirring constantly until the product acquires the proper consistence for plaster, adding more water during the process if necessary.

Contained in Emp. Ferri, Emp. Galbani, Emp. Hydrarg., Emp. Resinæ, Emp. Saponis.

This plaster of former Pharmacopœias wanted adhesiveness. The British Pharmacopœia directs long boiling, which secures sufficient tenacity, and it now resembles the famous strapping-plaster of Dr. Scott, of Bromley.

(Same as Brit. 1864; nearly same as Lond. Edin. and Dub.; Austr. Empl. Diachylon Simplex, Litharge 1, Lard 2—Compositum with Wax and Resins; Belg. Litharge 2, Oil 4, Water 1—also with Wax and Resins; Pr. Simplex, Litharge 5, Olive Oil 9; U. S. Empl. Plumbi, Litharge 15, Oil 28, Water, q. s.)

Equal weight of Lead Plaster and Soap Plaster melted together is an excellent plaster for corns.

PLUMBI SUBACETATIS LIQUOR.

SOLUTION OF SUBACETATE OF LEAD.

Syn. Liquor Plumbi Diacetatis.

Subacetate of Lead, $2\,PbO,C_4H_3O_3$, eq. 274; or $PbC_2H_3O_2$, ?; dissolved in water.

A dense, clear, colourless liquid, with alkaline reaction and sweet astringent taste.

Acetate of Lead, 5; Litharge, in powder, $3\frac{1}{2}$; Distilled Water, 20: boil half an hour, constantly stirring; filter, and make up 20.

Test.—Sp. g. 1·260. 6 drachms (413·3 grains by weight) require for perfect precipitation 810 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

When largely diluted, it is used externally as an astringent and sedative for inflammation arising from sprains, bruises, etc.; applied by means of cloths kept wet. As an astringent gargle ($\frac{1}{2}$ drm. to 6 oz. Rose Water).

(In all the Pharmacopœias; same as Lond. Edin. and U. S.; rather stronger than Dub.; Lond. Liquor Plumbi Diacet.; Edin. Plumbi Diacetatis Solutio; Austr. Plumbum Acetum Solutum; Belg. Subacetas Plumbi Liquidus; Fr. Sous-Acétat de Plomb Liquide; Pr. Plumbum Hydrico-Aceticum Solutum.)

(Same as Brit. 1864, Lond. and Edin.; Dub. weaker.)

Incompatibles.—Hard Water, Mineral Acids, and Salts, Vegetable Acids, Alkalies, Lime Water, Iodide of Potassium, all astringents, preparations of Opium, Albuminous Liquids.

Antidotes.—In case of poisoning with Acetate of Lead, the antidotes are—Sulphate or Phosphate of Soda, Epsom Salts, succeeded by emetics and active purgatives, and afterwards by Opium.

Preparations.

LIQUOR DILUTUS.

Solution of Subacetate of Lead, 1; Rectified Spirit, 1; Distilled Water, 78; mix and filter. =(1 in 80).

(Same as Brit. 1864 and Dub.; Lond. 1 in 112; U. S. 1 in 42; Austr. 1 in 27, Fr. Lotion avec l'Acétate de Plomb, 1 in 50; not in others.)

UNGUENTUM COMPOSITUM.

Solution of Subacetate of Lead, 6; Camphor, $\frac{1}{8}$; White Wax, 8; Almond Oil, 20: melt the Wax with 16 of the Oil, on a steam- or water-bath; re-

move the vessel, and, as soon as the mixture begins to thicken, gradually add the Solution of Subacetate of Lead, and stir the mixture constantly until it cools; then add the Camphor, dissolved in the rest of the Oil, and mix thoroughly.

(Same as Brit. 1864; the same as Ceratum Plumbi Compositum, Lond., excepting that White Wax is now used instead of Yellow. Similar to Ung. Plumbi, Pr.; Belg. Unguent. Subacetatis Plumbi; Fr. Cérat Saturné 1 in 10; Pr. Unguentum Plumbi 1 in 10; not in others.) =(1 in $5\frac{3}{4}$).

Not Officinal.

CREMOR LITHARGYRI (Dr. Kirkland).—Solution of Diacetate of Lead, 1; Cream, 8: mix.

GARGARISMA PLUMBI.—Solution of Diacetate of Lead, 1; Barley Water, 30: mix.

LOTIO PLUMBI DIACETATIS.—From 3 minims to 7 minims to an ounce of water.

PODOPHYLLI RADIX.

PODOPHYLLUM ROOT.

The dried rhizome of the *Podophyllum peltatum;* imported from North America.

Medicinal Properties.

An active and certain cathartic. Applicable to cases where brisk purging is required; combined generally with Henbane. Used in the place of Calomel as a cholagogue.

Dose.—10 to 20 grs. in powder, but rarely used in England, the resin being generally meant, when prescribed.

Preparation.

RESINA PODOPHYLLI.

Podophyllum, in coarse powder, 1; Rectified Spirit, $3\frac{3}{4}$, or a sufficiency; Distilled Water and Hydrochloric Acid, of each a sufficiency: exhaust the Podophyllum by percolation with the spirit; distil over the spirit; slowly pour the liquid remaining after the distillation of the tincture into three times its volume of water acidulated with one-twenty-fourth part of its weight of Hydrochloric Acid, constantly stirring; let it stand twenty-four hours; collect the resin which falls, wash on a filter with distilled water, and dry in a stove.

Solubility: totally in Rectified Spirit and Ammonia, and almost entirely in pure Ether.

Cholagogue, purgative; used as a substitute for Calomel.

Given in pills with Soap and Hyoscyamus, Rhubarb or Aloes.

(Brit. 1864 and U. S.; not in other Pharmacopœias.)

Dose.—$\frac{1}{6}$ to $\frac{1}{2}$ or even 2 grs. have been given in obstinate cases, but it is best to begin with $\frac{1}{8}$, and may be prescribed with Aloes and Soap.

Not Officinal.

SUPPOSITORIUM.—Podophyllin 1 gr., Oil of Theobroma sufficient to make one suppository.

POTASSIUM.

POTASSIUM.

K, or **K**; eq. 39.

Potassium was discovered by Sir Humphry Davy in 1807. It is a soft metal (sp. g. 0·865), cutting like wax, of a silver-white colour, but tarnishes the instant it is cut, and assumes a leaden colour. It has so great an affinity for Oxygen, that when thrown on water it combines with sufficient heat to set the Hydrogen on fire, and a Solution of Potash is the result.

Of the preparations of Potassium only the Bromide and the Iodide are admitted into the British Pharmacopœia.

POTASSII BROMIDUM.

BROMIDE OF POTASSIUM.

KBr, or **KBr**; eq. 119.

In white, transparent, cubical crystals, odourless, of a pungent saline taste.

Solubility: in Water, 1 in 2; less soluble in Rectified Spirit.

Test.—10 grains require for complete decomposition 840 grain-measures of the volumetric solution of Nitrate of Silver. A solution of this salt, mixed with the mucilage of Starch, and a drop of aqueous solution of Bromine or Chlorine, does not exhibit any blue colour—indicating absence of Iodide.

When its solution in water is mixed with a little Chlorine, Chloroform agitated with it, on falling to the bottom exhibits a red colour.

INCOMPATIBLES.—Acids, Acidulous Salts, Metallic Salts.

Medicinal Properties.

Introduced by Dr. Robert Williams, for chronic enlargements of the liver. It is employed in enlargement of the spleen, and in bronchocele and scrofula. It exerts a powerful influence on the generative organs, lowering their functions in a marked degree. This salt, as well as the Bromide of Ammonium, is used to produce anæsthesia of the larynx.

Of the Bromide of Ammonium Dr. Ramskill says, that in doses of 5 to 15 grains it is a most excellent nervine, good in hysterics; especially useful for sleeplessness of nervous persons, where there is no organic disease; and in epilepsy when the Bromide of Potassium fails.

(Brit. 1864, U.S. and Fr.; not in others.)

Dose.—5 to 40 grs.

In 1853 Sir Charles Locock spoke of having given Bromide of Potassium with good effect in *hysterical* epilepsy, where erotic symptoms had to be dealt with. In 1860 Dr. Radcliffe wrote, "I can testify, after repeated trials, that the Bromide of Potassium is often a very valuable remedy in cases of epilepsy where there is not the slightest sign of any erotic disposition,—in cases the most dissimilar in charac-

ter;" and this appears to be the first recommendation of this medicine in epilepsy generally. Since this time the evidence in favour of Bromide of Potassium in epilepsy and in epileptiform affections has accumulated to an almost overwhelming extent, if any opinion is to be drawn from the large and continuously increasing amount consumed in practice.

Dr. Sieveking, after long experience of its use, says that its efficacy in keeping off attacks of epilepsy for years is beyond dispute.

Not Officinal.

PESSARY.—Bromide of Potassium 10 grs., Oil of Theobroma sufficient to make one pessary.

POTASSII IODIDUM.

IODIDE OF POTASSIUM.

KI, or **KI**; eq. 166.

In colourless, generally opaque, cubical crystals.

Solubility: in Water, 4 in 3; Spirit, 1 in 6.

Test.—The addition of Tartaric Acid and Mucilage of Starch to its watery solution does not develope a blue colour—indicating absence of Iodate. Solution of Nitrate of Silver added in excess forms a yellow-white precipitate (Iodide of Silver), which, when agitated with Ammonia, yields by subsidence a clear liquid, in which excess of Nitric Acid causes no turbidity—indicating absence of Chlorine. Its aqueous solution is only faintly precipitated by the addition of Lime—indicating absence of Carbonates.

Medicinal Properties.

It is given in those cases where Iodine is indicated, but being less irritant, is almost universally preferred for internal administration.

(In all the Pharmacopœias.)

Dose.—2 to 10 grs.

INCOMPATIBLES.—Sweet Spirits of Nitre, Decoction of Liquorice, any vegetable preparation containing Starch; any acid preparations.

It is sometimes prescribed with Tincture of Bark, an ounce of which dissolves half a drachm.

Contained in Linimentum Iodi, Tinctura Iodi.

Preparations.

LINIMENTUM POTASSII IODIDI CUM SAPONE.

Hard Soap, in powder, $1\frac{1}{2}$; Iodide of Potassium, $1\frac{1}{2}$; Glycerine, 1; Oil of Lemon, $\frac{1}{8}$; Water, 10: dissolve the Soap in 7 of the water by heat of a water-bath; dissolve the Iodide of Potassium in the remainder of the water, and mix the two solutions together by trituration; when the mixture is cold add the Oil of Lemon, and mix the whole thoroughly.

The Pharmacopœia orders the Soap to be cut small, but the powder answers best.

UNGUENTUM.

Iodide of Potassium, 64 grs.; Carbonate of Potash 4 grs.; Distilled Water, 1 drm.; Prepared Lard, 1 oz.: dissolve the Carbonate and the Iodide in the Water, and mix thoroughly with the Lard. =(1 in $8\frac{3}{4}$).

(Same as Brit. 1864, Lond. Dub. Belg. U.S.; Fr. 1 in 8; Pr. 1 in 10; not in Edin.)

Note.—The Carbonate is introduced in order to prevent the ointment turning yellow.

Not Officinal.

PESSARY.—Iodide of Potassium 10 grs., Oil of Theobroma sufficient to make one pessary.

POTASSA CAUSTICA.

CAUSTIC POTASH.

Hydrate of Potash, KO,HO, or **KHO**; eq. 56.

In hard white pencils, very deliquescent, powerfully alkaline and corrosive.

Solubility: in Water, 2 in 1.

Test.—56 grains dissolved in Water leave only a trace of sediment, and require for neutralization at least 900 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

A powerful escharotic. Chiefly employed for making caustic issues. Has been much used for the destruction of tumours and the surface of malignant ulcers.

(In all the Pharmacopœias; Lond. Potassæ Hydras; Edin. Potassa.)

Preparation.

LIQUOR POTASSÆ. SOLUTION OF POTASH.

Carbonate of Potash, 2; Slaked Lime, 1½; Distilled Water, 20: dissolve the Carbonate of Potash in the water, and having heated the solution to the boiling-point in a clean iron vessel, gradually mix with it the Slaked Lime, and continue the ebullition for ten minutes with constant stirring; decant the clear liquid.

British sp. g. 1·058, containing 5·84 per cent. of Hydrate of Potash; Lond. 1·063; Edin. 1·072; Dub. 1·068; U. S. 1·065, containing 5·8 per cent. of Hydrate of Potash.

(Austr. Belg. 1·330; Pr. 1·335, containing 28 per cent. of Potash; not in Fr.)

Test.—1 fluid ounce (462·9 grains by weight) requires for neutralization 482 grain-measures of the volumetric solution of Oxalic Acid. It does not effervesce when added to an excess of dilute Hydrochloric Acid, nor give a precipitate with Lime or Oxalate of Ammonia—indicating absence of Carbonic Acid and Lime. When it is treated with an excess of dilute Nitric Acid and evaporated to dryness, the residue forms, with water, a nearly clear solution, which is only slightly precipitated with Chloride of Barium (indicating a trace of sulphates), and Nitrate of Silver (indicating a trace of chlorides), and is rendered very slightly turbid by Ammonia—indicating a trace of Alumina.

1 fluid drachm contains 3½ grains of anhydrous Potassa, and has about the same saturating power as Liquor Sodæ.

Medicinal Properties.

Antacid, diuretic, and antilithic. As an antacid in dyspepsia. Useful in many skin diseases dependent upon a morbid condition of the stomach;

given as an alterative in inflammation of the serous membrane attended with fibrinous depositions, as in pleuritis, pericarditis, and periostitis; also in scrofula, syphilis, and chronic rheumatism. Externally as a wash in chronic skin-diseases, as a stimulant lotion, and as an escharotic against the bite of rabid or venomous animals.

During a course of this, the urine does not become alkaline, which is the case when Carbonate of Potash is taken.

Dose.—15 to 60 minims three times a day in Beer, Milk, or Mistura Amygdalæ.

INCOMPATIBLES.—Acids, Acidulous Salts, Metallic Salts, the preparations of Ammonia, Belladonna, Henbane, and Stramonium.

ANTIDOTES.—Dilute Acetic Acid, Citric Acid, Lemon Juice, or any vegetable acids, fixed oils, demulcents.

Not Officinal.

BRANDISH'S ALKALINE SOLUTION.—American Pearl ashes 6 lb., freshly prepared Quicklime 2 lb., Wood ashes 2 lb., Boiling Water 6 gallons; or 6, 2, 2, and 60 parts: add first the Lime, then the Pearl ashes, and lastly the Wood ashes to the boiling water, stir well together, let it stand twenty-four hours, and decant the clear liquor.

Dose.—½ to 2 drms. in beer or milk. Given for scrofulous tumors.

POTASSA CUM CALCE (Vienna Paste).—Caustic Potash, 5 drms.; Slaked Lime, 6 drms.; Rectified Spirit, sufficient to make a mass. The paste is spread on the part to be cauterized, and is allowed to remain for ten or fifteen minutes, while the surrounding skin is protected by adhesive plaster.

Potassa cum Calce in cylinders of three different sizes, consisting of 2 parts of Potassa and 1 of Lime, were introduced by Dr. Henry Bennet and are a suitable form for the use of obstetricians.

POTASSA SULPHURATA.

SULPHURATED POTASH.

Tersulphuret of Potassium, KS_3, with Sulphate of Potash.

Solid greenish masses, liver-brown when recently broken, alkaline and acrid to the taste.

Carbonate of Potash, 10; Sublimed Sulphur, 5: mix them in a warm mortar, and heat them in a Cornish or Hessian crucible, at first gradually, until effervescence has ceased, and finally to dull redness, so as to produce perfect fusion; pour out the product on a clean slab, and cover quickly with an inverted basin till solid, then break into fragments which must be bottled immediately.

Test.—About three-fourths of its weight are dissolved by Rectified Spirit.

Medicinal Properties.

Irritant, narcotic, and antiseptic. A good remedy, both internally and externally, for scabies; used also for other chronic eruptions, especially lepra and psoriasis.

(In all the Pharmacopœias; Lond. and Edin. Potassii Sulphuretum; Dub. and U. S. Hepar Sulphuris; Pr. Kalium Sulphuratum; Fr. Foie de Soufre.)

Dose.—3 to 8 grs.

Preparation.

UNGUENTUM.

Sulphurated Potash, 30 grs., triturate, and add Prepared Lard, 1 oz.: mix. =(1 in 15½).

This Ointment quickly changes, and should therefore be prepared at the time it is required.

Not Officinal.

BALNEUM SULPHURETUM.—Sulphurated Potash, 4 oz.; Water, 30 gall.: dissolve.

This is not quite so agreeable as the Barèges waters, which may be made artificially as follows:—Sulphuret of Sodium, Subcarbonate of Soda, and Muriate of Soda, of each 20 grains to one gallon. But a much stronger solution is often used.

POTASSÆ ACETAS.

ACETATE OF POTASH.

$KO,C_4H_3O_3$, or $KC_2H_3O_2$; eq. 98.

White, foliaceous, satiny masses, very deliquescent.

Solubility: in Water, 100 in 35; in Proof Spirit, 1 in 2.

Test.—Neutral to test paper. Entirely soluble in Rectified Spirit. Its solution is unaffected by Hydrosulphuret of Ammonia (Sulphide of Ammonium).

Medicinal Properties.

Diuretic and purgative. Advantageously used as a purgative and diuretic in dropsy. It has been used with great success in acute rheumatism.

Best administered in simple solution, with a little Sugar if desired.

(In all the Pharmacopœias except Austr., which contains a solution, sp. g. 1·200.)

Dose.—10 to 20 grs. as a diuretic; 2 to 3 drms. as a laxative.

POTASSÆ BICARBONAS.

BICARBONATE OF POTASH.

Syn. POTASSÆ CARBONAS.

$KO,HO,2CO_2$, or $KHCO_3$; eq. 100.

In colourless, right rhombic prisms, not deliquescent, of a saline, feebly alkaline taste.

Solubility: in Water, 1 in 3. Insoluble in Rectified Spirit.

Test.—50 grains exposed to a low red-heat, leave 34½ grains of a white residue (Carbonate of Potash), which requires for exact saturation 500 grain-measures of the volumetric solution of Oxalic Acid.

15 grains of Citric Acid neutralize 20 grains of this salt.

Medicinal Properties.

Antacid, antilithic, and diuretic. A powerful alterative, from its rendering the blood and urine strongly alkaline. Used in dyspepsia as an antacid, and in urinary affections where there is a deposition of Uric Acid. Highly useful in acute rheumatism in large and frequent doses.

Closely resembles the carbonate, but without its irritant qualities.

Administered in aërated water or plain bitter infusion.

(Same as Brit. 1864, Lond. Edin. Dub. U. S. Pr. Kali Bicarbonicum Purum, and Fr.; not in others.)

Dose.—10 to 20 grs. as an antacid or antilithic; 1 to 2 drms. as a diuretic. In acute rheumatism, 30 to 40 grs. every four hours, freely diluted.

LIQUOR POTASSÆ EFFERVESCENS. *Syn.* POTASH WATER.

Bicarbonate of Potash, 30 grs.; Water, 20 oz.: dissolve, and filter the solution, then pass into it as much Carbonic Acid gas (obtained by the action of Sulphuric Acid on Chalk) as can be introduced by the pressure of seven atmospheres, bottle it and secure the corks with wires.

Dose.—5 to 10 oz.

POTASSÆ BICHROMAS.

BICHROMATE OF POTASH.

$KO,2\,CrO_3$ or $K_2Cr_2O_7$; eq. 295.

Used to produce the Valerianate of Soda.

POTASSÆ CARBONAS.

CARBONATE OF POTASH.

Syn. SUBCARBONATE OF POTASH, SALT OF TARTAR, SALT OF WORMWOOD.

Carbonate of Potash, KO,CO_2, eq. 69; or K_2CO_3, eq. 138 (with about 16 per cent. of Water of Crystallization).

A white crystalline powder, alkaline and caustic, very deliquescent.

Solubility: in Water, 100 in 75. Insoluble in Spirit.

Test.—Loses about 16 per cent. of its weight when exposed to a red-heat. When supersaturated with Nitric Acid and evaporated to dryness, the residue is almost entirely soluble in Water, only a little Silica remaining undissolved. It is precipitated only faintly by Chloride of Barium and Nitrate of Silver. 83 grains require for neutralization at least 980 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

Antacid, antilithic, and diuretic. It is less corrosive than Caustic Potash. Like the bicarbonate, it is diuretic, but inferior to the other salts of Potash,—the nitrate, acetate, and bitartrate. As an antilithic it is preferable to the bicarbonate, and if the tendency to lithic discharge be great, about 35 grains, in divided doses, may be given daily. Sometimes a solution is used as an antilithic injection.

(In all the Pharmacopœias; Pr. Kali Carbonicum Depuratum.)

Dose.—5 to 12 grs.; Brit. Ph. dose 10 to 30 grs.

Contained in Decoctum Aloes Compositum, Enema Aloes, Liquor Arsenicalis, Mistura Ferri Composita.

POTASSÆ CHLORAS.

CHLORATE OF POTASH.

KO,ClO_5, or $KClO_3$; eq. 122·5.

In colourless, rhomboidal, crystalline plates, with a cool saline taste.

Solubility: in cold Water, 1 in 12; in boiling Water, 1 in 2.

Test.—Its solution is not affected by Nitrate of Silver or Oxalate of Ammonia. Indicating absence of Chlorides and Lime. By heat it fuses and gives off an abundance of oxygen gas.

Medicinal Properties.

Stimulant and diuretic, and appears to undergo no change in passing to the kidneys. The mode of action is very doubtful. Its effects are best proved in inflammatory affections of the mouth. Useful when the powers of the system require to be roused, as in the low stage of typhus fever, and particularly, for the same purpose, in smallpox and scarlatina. A strong solution, made with hot water, is the best wash for the mouth when the gums are spongy and irritable; it relieves the tenderness and induces a firmness of the gums.

(In all the Pharmacopœias; except Edin.)

Dose.—10 to 20 grs. in water three or four times daily.

TROCHISCI.

Chlorate of Potash, in powder, 3600 grs.; Refined Sugar, in powder, 25 oz.; Gum Acacia, in powder, 1 oz.; Mucilage, 2 oz.; Distilled Water, 1 oz., or a sufficiency: mix the powders, and add the mucilage and water to form a proper mass, divide into 720 lozenges.

Each lozenge contains 5 grains of Chlorate of Potash.

Dose.—1 to 6 lozenges.

(Fr. Tablettes, containing 1½ grain in each lozenge.)

Not Officinal.

GARGARISMA.—Chlorate of Potash, 1 drm.; Honey, ½ oz.: water to 8 oz.

POTASSÆ CITRAS.

CITRATE OF POTASH.

$3KO,C_{12}H_5O_{11}$, or $K_3C_6H_5O_7$; eq. 306.

A white powder, of saline, feebly acid taste, and deliquescent.

Solubility: in Water, 10 in 6. Insoluble in Proof Spirit.

Test.—102 grains heated to redness till gas ceases to be evolved, leaves an alkaline residue (Carbonate), which requires for exact saturation 1000 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

A refrigerant diaphoretic and mild alkaline laxative. Useful in gout and

rheumatism. It is a valuable saline febrifuge, increasing the secretion of the kidneys, and is thus eliminated in the urine, rendering it neutral or alkaline. Given in cases of uric acid gravel; also as a drink in scurvy.

(Brit. 1864 and U. S.; not in others.)

Dose.—20 to 60 grs. in water.

POTASSÆ NITRAS.

NITRATE OF POTASH.

KO,NO_5, or KNO_3; eq. 101.

In white opaque masses or fragments of opaque, striated, six-sided prisms, colourless, of a peculiar cool saline taste.

Solubility: in cold water, 1 in 4; in boiling water, 1 in $2\frac{1}{2}$.

Test.—Its solution is not affected by Chloride of Barium or Nitrate of Silver.

Medicinal Properties.

Refrigerant, diuretic, and diaphoretic. Reduces the pulse, and is peculiarly depressing. Much used in acute inflammatory diseases. With Tartar Emetic and Calomel it promotes the secretions of the liver and skin, and lessens febrile excitement. Useful as a gargle in inflammatory sore-throat.

(In all the Pharmacopœias; Pr. Kali Nitricum.)

Dose.—5 to 20 grs. as a refrigerant and diuretic; 20 to 30 grs. as a vascular sedative.

Not Officinal.

FUMIGATIO.—Soak porous paper in a solution of Nitre, dry it, roll it up, and burn in a candlestick. Used in asthma.

GARGARISMA.—Nitre, $\frac{1}{4}$ oz.; Oxymel, 1 oz.; Barley Water, 7 oz.

POTASSÆ PERMANGANAS.

PERMANGANATE OF POTASH.

KO,Mn_2O_7, or $KMnO_4$; eq. 158.

In dark purple, slender, prismatic crystals, inodorous, with a sweet astringent taste.

Solubility: in Water, 1 in 16.

Test.—Entirely soluble in cold Water, producing a rich purple colour. 5 grains dissolved in Water require, for complete discoloration, a solution of 44 grains of granulated Sulphate of Iron acidulated with 2 drachms of dilute Sulphuric Acid.

Medicinal Properties.

A powerful antiseptic. Given also in diabetes. Externally, as a caustic and deodorizer, to foul ulcers and cancers. Corrects offensive evacuations.

Dose.—1 to 2 grs. three times daily in water, gradually increasing.

(Brit. 1864, U. S. and Fr.; not in others.)

Preparation.

LIQUOR POTASSÆ PERMANGANATIS.

Permanganate of Potash, 4 grs.; Distilled Water, 1 oz.: dissolve.
=(1 in 120).

(Same as Brit. 1864; half the strength of Condy's Fluid.)

INCOMPATIBLES.—Ought never to be put in corked bottles, as it soon becomes decomposed when in contact with any organic substance, animal or vegetable.

Diluted with 40 parts water, it is useful as a gargle or as a cleaning wash for diseased surfaces.

Dose.—2 to 4 drms.

POTASSÆ PRUSSIAS FLAVA.

YELLOW PRUSSIATE OF POTASH.

Syn. FERROCYANIDE OF POTASSIUM.

$K_2F_2C_6N_3+3HO$, eq. 211; or $\mathbf{K_4FeC_6N_6, 3H_2O}$, eq. 422.

Used to prepare Acidum Hydrocyanicum Dilutum.

POTASSÆ SULPHAS.

SULPHATE OF POTASH.

KO,SO_3, eq. 87; or $\mathbf{K_2SO_4}$, eq. 174.

In colourless, hard, six-sided prisms, terminating by six-sided pyramids.

Solubility: in cold Water, 1 in 10; boiling Water, 1 in 4. Insoluble in Rectified Spirit.

Test.—Its solution is neutral to test paper; is not affected by Oxalate of Ammonia,—indicating absence of Lime.

Medicinal Properties.

Mildly cathartic, usually operating without irritation. Generally given in combination with Rhubarb. A useful purgative in jaundice and dyspeptic affections.

(In all the Pharmacopœias; Fr. Sulfate de Potasse; Pr. Kali Sulphuricum.)

Dose.—10 to 20 grs. as an alterative; 1 to 2 drms. as a purgative.

Contained in Pilula Colocynthidis Composita and Pulvis Ipecacuanhæ Compositus.

Sulphate of Potash was long known as Sal Polychrestum, and the Bisulphate (the residue from making Nitric Acid) is called Sal Enixum.

Not Officinal.

POTASSÆ SULPHIS.—A Salt obtained by saturating a solution of Carbonate of Potash with Sulphurous Acid Gas and crystallizing it. Solubility in water, 1 in 3. Dose: 10 grs. in Pyemia.

POTASSÆ TARTRAS.

TARTRATE OF POTASH.

$2\,KO,C_8H_4O_{10}$; or $K_2C_4H_4O_6$, eq. 226.

In small, colourless, four- or six-sided prisms.

Solubility: in water, 10 in 8. Insoluble in Rectified Spirit.

Test.—Entirely dissolved by its own weight of Water. 113 grains heated to redness till gases cease to be evolved, leave an alkaline residue (Carbonate), which requires for exact saturation 1000 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

A mild, cooling purgative, operating, like most of the neutral salts, without much pain, and producing watery stools. In smaller doses, diuretic and alterative.

(In all the Pharmacopœias; Lond. Edin. Dub. and U. S.; Austr. Kali Tartaricum Neutrum; Fr. Tartrate Neutre de Potasse; Belg. and Pr. Kali Tartaricum.)

Dose.—As a diuretic and alterative, 20 to 60 grs.; as a purgative, 120 to 200 grs.

POTASSÆ TARTRAS ACIDA.

ACID TARTRATE OF POTASH.

Syn. POTASSÆ BITARTRAS; CREAM OF TARTAR.

$KO,HO,C_8H_4O_{10}$; or $KHC_4H_4O_6$, eq. 188.

A finely gritty white powder, or fragments of cakes crystallized on one surface, of a pleasant acid taste.

Solubility: in cold Water, 1 in 200; in boiling Water, 1 in 18. Insoluble in Rectified Spirit.

Test.—188 grains heated to redness till gas ceases to be evolved, leave an alkaline residue (Carbonate), which requires for exact saturation 1000 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

Cathartic, diuretic, and refrigerant. Much used in febrile and dropsical affections.

Dose.—As a refrigerant or diuretic, 20 to 60 grs.; as an aperient, 60 to 120 grs.; as a hydragogue cathartic, ½ to 1 oz.

(In all the Pharmacopœias; Fr. Tartrate Acide de Potasse; Pr. Kali Bitartaricum Purum.)

Contained in Confectio Sulphuris, Pulvis Jalapæ Compositus.

Not Officinal.

POTASSÆ BORO-TARTRAS (Fr.), Soluble Cream of Tartar.—Acid Tartrate of Potash, 4; Boracic Acid, 1; Water, 32: evaporate in a water bath, and afterwards dry in a stove.

PRUNUM.

PRUNE.

The dried drupe of the plum, *Prunus domestica*, from plants cultivated in Southern Europe.

Medicinal Properties.

Nutritious and refrigerant. Rarely prescribed, though often used in domestic medicine as a laxative.

(In all the Pharmacopœias except Pr.)

Contained in Confectio Sennæ.

PTEROCARPI LIGNUM.

RED SANDAL-WOOD.

The wood of the *Pterocarpus santalinus*, from Ceylon, in chips.

Used solely as a colouring agent.

(In all the Pharmacopœias except U. S. Pr.; Fr. Santal Rouge.)

Contained in Tinctura Lavandulæ Comp.

The Essential Oil (Ol. Santalis flav.) has lately been prescribed for Gonorrhœa. Dose: 30 minims rubbed down with ʒj Mucilage, adding ʒj Syrup and ʒss Tincture of Orange three times a day.

PULVERES.

POWDERS.

The following Powders, included in previous Pharmacopœias, are omitted from the British:—Pulvis Aloes Compositus, Lond.; Aluminis Compositus, Edin.; Antimonii Compositus, Lond. Edin. Dub.; Cinnamomi Compositus, Lond. Edin. Dub.; Cretæ Compositus, Lond. Edin. Dub.; Cretæ Compositus cum Opio, Lond. Edin. Dub.; Salinus Compositus, Edin.; Pulveres Effervescentes, Edin. Dub.

The following Powders are introduced into the British Pharmacopœia:—Pulvis Amygdalæ Comp. (formerly Confectio Amygdalæ), Antimonialis (formerly P. Antimonii Comp.), Aromaticus (same as Conf. Aromatica, without Chalk), Cretæ Aromatica (formerly Confectio Aromatica).

The following Powders are contained in the British Pharmacopœia, the formulæ of which will be found under the names of the substances from which they are prepared:—

		Proportions of active ingredients to the whole.
Page 31.	PULVIS AMYGDALÆ COMPOSITUS	8 in 13.
31.	PULVIS ANTIMONIALIS	Oxide 1 in 3.
73.	PULVIS CATECHU COMPOSITUS	1 in 2½.
84.	PULVIS CINNAMOMI COMPOSITUS	1 in 3.
93.	PULVIS CRETÆ AROMATICUS	1 in 4.

		Proportions of active ingrepients to the whole.
Page 94.	PULVIS CRETÆ AROMATICUS CUM OPIO	Opium 1 in 40.
143.	PULVIS IPECACUANHÆ COMPOSITUS	Opium 1 in 10.
144.	PULVIS JALAPÆ COMPOSITUS	1 in 3.
145.	PULVIS KINO COMPOSITUS	Opium 1 in 20.
177.	PULVIS OPII COMPOSITUS	Opium 1 in 10.
209.	PULVIS RHEI COMPOSITUS	1 in 4½.
220.	PULVIS SCAMMONII COMPOSITUS	1 in 2.
252.	PULVIS TRAGACANTHÆ COMPOSITUS.	

PYRETHRI RADIX.

PELLITORY ROOT. PELLITORY OF SPAIN.

The root of *Anacyclus Pyrethrum*, imported from the Levant.

Medicinal Properties.

Is powerfully stimulant to the salivary glands, causes a copious flow of saliva, and, on that account, is so effective in relieving toothache, and has been useful in paralysis of the tongue.

(Lond. Edin. Austr. Belg. Fr.)

Preparation.

TINCTURA.

Pellitory Root, in coarse powder, 4; Rectified Spirit, 20: macerate for forty-eight hours with fifteen of the spirit, agitating occasionally, then pack in a percolator, let it drain, and pour on the remaining spirit; when it ceases to drop, press, filter, and make up to 20. =(1 in 5).

Chiefly used alone or in mixture for relieving toothache.

(Austr. Belg. Fr. 1 in 5 by weight; not in others.)

A new preparation.

PYROXYLIN.

GUN COTTON.

Cotton, 1; Sulphuric Acid, 5; Nitric Acid, 5: mix the Acids, immerse the Cotton, and stir with a glass rod for three minutes, or until it is thoroughly wetted, then remove it, and thoroughly wash out the acid, so that the washings cease to precipitate Chloride of Barium. Drain on filtering paper, and dry in a water bath.

Test.—Readily soluble in a mixture of Ether and Rectified Spirit. Leaves no residue when exploded by heat.

PREPARATIONS.—Collodion, Collodium Flexile. See page 87.

(Same as Brit. 1864.)

QUASSIÆ LIGNUM.

QUASSIA WOOD.

The wood of the *Picræna excelsa*, from Jamaica, in raspings and chips.

Medicinal Properties.

Possesses in a high degree the properties of the simple bitters, without astringency. Tonic. Particularly adapted to dyspepsia and in the debility which succeeds acute disease, also as a tonic in intermittents. A good vehicle for Iron Preparations.

(In all the Pharmacopœias.)

Preparations.

EXTRACTUM.

Quassia, rasped, 1 lb.; Distilled Water, a sufficiency: macerate the Quassia in 8 oz. of water for twelve hours, pack in a percolator, add water till the Quassia is exhausted, evaporate, filter before it becomes thick, again evaporate by a water-bath to a proper consistence for forming pills.

48 oz. of wood yield 1 ounce of extract.

(In all the Pharmacopœias, except Lond. and Dub.)

Dose.—3 to 5 grs.

INFUSUM.

Quassia, in chips, 60 grs.; cold Distilled Water, 10 oz.: infuse half an hour and strain. =(1 in 80).

(Same as Brit. 1864; Lond. 1 in 240; Edin. 1 in 160; Dub. 1 in 64; U. S. 1 in 64; Fr. 1 in 200; not in Austr. Belg. and Pr.)

It thus appears that the Infusion of the British Pharmacopœia is three times the strength of Lond., twice that of Edin., but weaker than Dub. and U. S.

Dose.—1 to 2 oz.

A good vehicle for iron preparations.

TINCTURA QUASSIÆ.*

Quassia in chips, $\frac{3}{4}$; Proof Spirit, 20: digest seven days, filter, and make up 20. =(1 in 27).

(Edin. 1 in 32; U. S. 1 in 15; Belg. 1 in 5, Fr. 1 and 5 by weight.)

Dose.—1 to 2 drms.

QUERCUS CORTEX.

OAK BARK.

The dried bark of the small branches and young stems of the *Quercus pedunculata*, collected in spring from plants growing in Britain.

Medicinal Properties.

A valuable astringent, whether administered internally or applied externally. May be used either generally or topically, in all cases requiring astringents, such as tenderness of the gums; in leucorrhœa, prolapsus, etc.

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* Introduced in 1867; at variance in strength with all other formulæ, and not in harmony with any rule.

(Brit. 1864, Lond. Edin. Dub. U. S. and Belg.; Fr. Écorce de Chêne; not in others.)

Dose.—Of the powder, 30 to 120 grs.

Preparation.

DECOCTUM.

Oak Bark, bruised, $1\frac{1}{4}$; Distilled Water, 20: boil ten minutes in a covered vessel and strain; wash the marc with water to make up 20. =(1 in 16).

(Same as Lond. and Edin.; Brit. 1864, Dub. Belg. and U. S. 1 in 20; not in others.)

Dose.—1 to 2 oz. two or three times daily.

INCOMPATIBLES.—Mineral Acids, Alkalies, Metallic Salts, Gelatine, Alkaloids.

QUINIÆ SULPHAS.

SULPHATE OF QUINIA.

$C_{40}H_{24}N_2O_4,HO,SO_3+7HO$, eq. 436; or $(C_{20}H_{24}N_2O_3)_2H_2SO_4,7H_2O$, eq. 872.

The sulphate of an alkaloid prepared from Yellow Cinchona Bark and from the bark of *Cinchona lancifolia*.

100 parts consist of 75 Quinia, 9 Sulphuric Acid, and 16 Water.

Yellow Cinchona Bark, in coarse powder, 16; Hydrochloric Acid, 3; Distilled Water, a sufficiency; Solution of Soda, 80; dilute Sulphuric Acid, a sufficiency. Proceed as directed in the Pharmacopœia.

Solubility: in Water, 1 in 1000.

60 grs. require 30 minims of diluted Sulphuric Acid for solution in 2 oz. of distilled water.

60 grs. require 80 minims of diluted Nitric Acid for solution in 3 oz. of water.

Test.—Dissolves in pure Sulphuric Acid with a feeble yellowish tint, and undergoes no further change of colour when gently warmed. 10 grains, with 10 minims of diluted Sulphuric Acid and half a fluid ounce of Water, form a perfect solution, from which Ammonia throws down a white precipitate. This re-dissolves on agitating the whole with half a fluid ounce of pure Ether, without the production of any crystalline matter floating on the lower of the two strata into which the agitated fluid separates on rest—indicating absence of Quinidia and Cinchonia. The upper stratum of fluid, if entirely removed by a pipette and evaporated, leaves a white residue, which, when dried in the air without heat, weighs 8·6 grains, and is pure Quinia.

25 grs. of Sulphate of Quinia should lose 3·6 grs. of water by drying at 212°.

Sulphate of Quinia is prepared with profit only on a large scale. The test given for its purity is a sufficient safeguard to the purchaser.

12 grains possess the power of 1 ounce of good bark.

Contained in Ferri et Quiniæ Citras.

INCOMPATIBLES.—All Alkalies and their Carbonates; astringent Infusions throw down a Tannate of Quinine, which Sulphuric Acid, instead of dissolving, helps in pre-

cipitating. Tinctures do not readily dissolve Quinine; it should be always prescribed in mixtures with a little Nitric Acid, or if preferred in drops, can be made as already directed with either of the Acids.

Medicinal Properties.

Sulphate of Quinia may be substituted in all cases where Cinchona is applicable, and in the treatment of intermittent fevers has almost superseded the bark. Useful in many chronic diseases in which intermissions do not occur, as in chronic and pulmonary catarrh kept up by weakened habit, chronic diarrhœa, scrofulous condition of the system, and every case of direct debility. Useful in neuralgia.

When a large dose (say 10 grains) is given, it is best suspended in water; the bitterness is not then so intense as when in solution; prescribed in pill, syrup, confection, or Glycerine is best. When in mixture, Tincture of Orange and sometimes Spirit of Ether is added to prevent its causing headache. The Infusion of Roses of the Pharmacopœia is a favourite vehicle, but it is always turbid and unsightly; in the Infusion of Roses with Nitric Acid (*vide* Rosa Gallica) it is bright and attractive in appearance. But if Sulphuric Acid, or even Sulphate of Magnesia, is prescribed with Quinine in this Infusion, it becomes at once turbid.

(In all the Pharmacopœias; Lond. Quinæ Disulphas; Pr. Chinium Sulphuricum.)

Dose.—1 to 5 grs. three times daily as a tonic, or in larger doses as an antiperiodic.

Preparations.

PILULA.

Sulphate of Quinia, 60 grs.; Confection of Hips, 20 grs.: mix. =(1 in $1\frac{1}{3}$).

Dose.—2 to 10 grs.

TINCTURA QUINIÆ.

Sulphate of Quinia, 1; Tincture of Orange Peel, 60: dissolve with a gentle heat, digest for three days with occasional agitation, and strain. =(1 in 60).

Dose.—1 to $1\frac{1}{2}$ drm.

Note.—Some chemists, I am told, add 1 minim of diluted Sulphuric Acid to each fʒj of Tincture in order to dissolve all the Quinia; this is a mistake, for as the Tinct. of Orange dissolves nearly the whole of the Quinia, it is not needed, nor does the acid diminish the precipitation of the Tannate of Quinia.

A good preparation, and a very convenient form to be used by travellers under a course of Quinine.

VINUM QUINIÆ.

Sulphate of Quinine, 20 grs.; Citric Acid, 30 grs.; Orange Wine, 20 oz.; dissolve first the Citric Acid and then the Sulphate of Quinia in the wine: digest three days and filter. =(1 in 480).

Dose.—$\frac{1}{2}$ to 1 oz.

Not Officinal.

Liquor Quiniæ Ammoniata.—Disulphate of Quinia, 1; Strong Solution of Ammonia, 10; Rectified Spirit, 50: dissolve.

Dose.—$\frac{1}{2}$ to 1 drm.

Quiniæ Arsenias.—Dose $\frac{1}{10}$ gr.

Quiniæ Valerianas.—Made by decomposing Muriate of Quinia with Valerianate of Soda. Solubility: 1 in 110 Cold Water, 1 in 40 boiling; 1 in 6 in Cold Rect. Sp.; 1 in 1 boiling: also soluble in Ether.

Syrup of Dikinate of Quinia.—Introduced by Dr. Donovan, of Dublin. 1 drm. contains 2 grs. of Dikinate of Quinia, which is equal to 3¾ oz. of Decoction of Bark or 96 grs. of Powdered Bark.

Dose.—½ to 1 drm.

Syrupus Quiniæ Hydriodatis. 1 grain in each drachm.

An excellent remedy in cases of chronic rheumatism.

Dose.—A teaspoonful.

RESINA.

RESIN.

The residue of the distillation of the Turpentines from various species of *Pinus* and *Abies*.

Medicinal Properties.

Important as an ingredient of ointments, but never used internally.

(In all the Pharmacopœias except Pr.; Austr. Terebinthina Cocta; Belg. Resina Alba.)

Contained in Charta Epispastica, Emplastra and Unguentum Terebinthinæ.

Preparations.

EMPLASTRUM.

Resin, in powder, 2; Litharge Plaster, 16; Hard Soap, 1: melt the Plaster with a gentle heat, add the Resin and Soap, first liquefied, and mix.

=(1 in 9½).

(Brit. 1864, Lond. Edin. Dub. Belg. and U. S.; not in others.)

Used chiefly for strapping wounds and ulcers.

UNGUENTUM.

Resin, in coarse powder, 2; Yellow Wax, 1; Simple Ointment, 4: melt with a gentle heat, strain while hot through flannel, and stir till cool.

=(1 in 3½).

(Brit. 1864, Edin. Dub.; Lond. Ceratum; Fr. Onguent Basilicum; not in others.)

A stimulant dressing for indolent ulcers.

RHAMNI SUCCUS.

BUCKTHORN JUICE.

The recently expressed juice of the ripe berry of Common Buckthorn, *Rhamnus Catharticus*.

Medicinal Properties.

A powerful cathartic, producing many watery evacuations and sometimes severe tormina. Given in dropsy, but, on account of its severity of operation, is not much used.

Preparation.

SYRUPUS.

Buckthorn juice, 97; Ginger, sliced, 1; Pimento, bruised, 1; Refined Sugar, 97; Rectified Spirit, 8 oz.: evaporate the juice to nearly half (⅝), add the Ginger and Pimento, digest at a gentle heat for four hours, and

strain; when cold add the spirit, let the mixture stand for two days, then decant off the clear liquor, and in this dissolve the sugar with a gentle heat.

Sp. g. 1·320.

(Same as Lond. and Edin.)

Dose.—1 drm.

RHATANIA.—*See* KRAMERIA.

RHEI RADIX.

RHUBARB ROOT.

From the dried root deprived of its bark, one or more undefined species of *Rheum*, from China, Chinese Tartary, and Thibet. Imported from Shanghai and Canton.

Test.—Free from decay, not worm-eaten, Boracic Acid does not turn the yellow exterior brown. In the powder, adulterations are detected with difficulty.

Medicinal Properties.

Cathartic and astringent, the latter property not interfering with the former, as the purgative effect precedes the astringent. Used in dyspepsia attended with constipation; in diarrhœa when purging is indicated; in the second stage of cholera infantum; in chronic dysentery, and in typhous diseases when cathartic medicine is necessary. It is non-irritant, and increases the effect of other cathartics.

4 grains of Powdered Rhubarb and 1 minim of Glycerine make a nice pill.

Dose.—As a stomachic, 1 to 5 grs. of the powder: as a purgative, 10 to 20 grs.

(In all the Pharmacopœias.)

Bicarbonate of Soda in equal weight with powdered Rhubarb takes off the astringency, and covers the taste; the addition of Peppermint Water still further hides it; or 1 drop of Oil of Peppermint, 30 grains Sugar, will disguise the taste of 15 grains of powdered Rhubarb. 1 drop Oil Nutmeg, 30 grains Sugar, and 10 grains of powdered Rhubarb, makes a pleasant draught.

Preparations.

EXTRACTUM.

Rhubarb, sliced or bruised, 8; Rectified Spirit, 5; Distilled Water, 50: mix and macerate four days, decant, press, and allow to settle; pour off the clear liquor, filter the remainder, mix, and evaporate, by water-bath, at 160° F., to a proper consistence for forming pills.

Good Rhubarb yields 39 per cent. of Extract.

(In all the Pharmacopœias; Fr. soft aqueous extract; Pr. reduced to powder; U. S. with Alcohol.)

Dose.—3 to 6 grs. Brit. Ph. dose 5 to 20 grs.

INFUSUM.

Rhubarb, in thin slices, 1; boiling Distilled Water, 40: infuse one hour and strain. =(1 in 40).

(Same as Brit. 1864; Lond. 1 to 48; Edin. with Sp. Cinnam. 1 to 20; Dub. 1 to 36; U. S. 1 to 32; Belg. 1 to 15, cold; Fr. cold, 1 in 200; not in others.)

Dose.—1 to 2 oz.

PILULA COMPOSITA.

Rhubarb, in fine powder, 3 oz.; Socotrine Aloes, in fine powder,* 2¼ oz.; Myrrh, in fine powder, 1½ oz.; Hard Soap, 1½ oz.; English Oil of Peppermint, 1½ drm.; Treacle, by weight, 4 oz.: reduce the Soap to fine powder and triturate it with the Rhubarb, Aloes, and Myrrh, add the Treacle and Oil, and beat into a mass.

(Same as Brit. 1864, Dub. and Fr.; Edin. U. S. (Lond. with Oil of Caraway); not in others.)

Dose.—5 to 10 grs.

PULVIS COMPOSITUS.

Rhubarb, in powder, 2; Light Magnesia, 6; Ginger, in powder, 1: mix. =(1 in 4½).

The original Dr. Gregory's Powder.

(Same as Brit. 1864, Edin. Dub. and U. S.; Pr. Pulvis Magnesiæ cum Rheo, pro infantibus Carb. Magnes. 60, Sacch. 40, Rhei 15, Ol. Fœnic. 1; not in others.)

Dose.—½ to 1 drm. 5 to 10 grs. for children.

SYRUPUS.

Rhubarb in coarse powder, 2; Coriander Fruit in powder, 2; Refined Sugar, 24; Rectified Spirit, 8; Distilled Water, 24: mix the Rhubarb and Coriander, pack them in a percolator, pass the spirit and water previously mixed slowly through them, evaporate the liquid that has thus passed until it is reduced to 13, and in this, after it has been filtered, dissolve the Sugar with a gentle heat.

Dose.—1 to 4 drms.

(Fr. Sirop de Rhubarbe Composé; Belg. Syr. Rhei, and Syr. Rhei Compositus.)

A new preparation.

TINCTURA.

Rhubarb, bruised, 2; Cardamom Seeds, bruised, ¼; Coriander, bruised, ¼; Saffron, ¼; Proof Spirit, 20: macerate for forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator, and when it ceases to drop, pour on the remaining spirit, press and wash the marc, and add spirit to make up 20. =(1 in 10).

(Same strength as Brit. 1864, Dub. and U. S; Lond. weaker; Edin. stronger; Fr. and Belg. Rhubarb only, 1 in 5 by weight; Austr. Pr. Tinct. Vinosa, 1 to 12; Fr. has also the formula of the Brit. Ph.)

Dose.—As a stomachic, 1 to 2 drms.; as a purgative, ½ to 1 oz.

VINUM.

Rhubarb in coarse powder, 1½; Canella Bark, ⅛; Sherry, 20: macerate 7 days, filter and make up 20. =(1 in 14).

Dose.—1 to 2 drms.

(Edin. 1 in 8; Dub. 1 in 13; Belg. 1 in 7; Fr. 1 in 16; not in others.)

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* Some physicians prefer the aqueous extract.

RHŒADOS PETALA.

RED POPPY PETALS.

The petals of the *Papaver Rhœas*, dried; from indigenous plants.

Medicinal Properties.

Of feeble opiate powers; chiefly used on account of its colouring property.

(In all the Pharmacopœias; Fr. Coquelicot.)

Preparation.

SYRUPUS RHŒADOS.

fresh

Red Poppy Petals, ~~dried~~, 13; Refined Sugar, 36; Distilled Water, 20 or a sufficiency; Rectified Spirit, 2½: add the petals gradually to the water, heated in a water-bath, frequently stirring, remove the vessel, and macerate twelve hours, press out the liquor, strain, add the Sugar, and dissolve by heat; when nearly cold, add the spirit, and Distilled Water to weigh 58, and measure 43½; sp. g. 1·330. =(1 in 3½).

(Same as Brit. 1864, Lond. Edin. and Austr. fresh Petals 1, Sugar 3; Belg. Syr. Papav. Rheados; not in others.)

Dose.—1 to 2 drms.

RICINI OLEUM.

CASTOR OIL.

Sp. g. 0·969.

The Oil expressed in England from the seeds of the *Ricinus communis*, or imported from America and the East Indies, chiefly from Calcutta.

It is frequently obtained by decoction, or by the agency of Alcohol.

Test.—Entirely soluble in one volume of Alcohol, and in two volumes of Rectified Spirit.

Medicinal Properties.

A mild and speedy cathartic. Particularly applicable to constipation from indurated fæces, or after swallowing acrid substances, or on the accumulation of acrid secretions. Used in diseases attended with irritation or inflammation of the bowels, as colic, diarrhœa, dysentery, and enteritis. The safest cathartic for infants, to whom a larger relative dose than to adults may be given, probably from their digesting more of the Oil. An enema may be made of 2 or 3 ounces, with some mucilaginous fluid.

(In all the Pharmacopœias.)

Dose.—½ to 1 oz. for adults, 1 to 3 drms. for infants.

May be administered floating on some aromatic water, or mixed in a cup of hot sweetened coffee; or, for a delicate stomach, as an emulsion with mucilage or yolk of egg, loaf sugar, and peppermint water.

The yolk of an egg=f ʒss is sufficient for f ʒj Castor Oil.

Contained in Collodion Flexile, Linimentum Sinapis Comp., Pil. Hydrarg. Subchloridi.

Not Officinal.

The decoction of the leaves of *Ricinus* applied to the breasts is said to produce an abundant supply of milk.

ROSÆ CANINÆ FRUCTUS.

FRUIT OF THE DOG-ROSE. HIPS.

The ripe fruit of the *Rosa canina*, deprived of the hairy seeds; indigenous.

Medicinal Properties.

Slightly refrigerant and astringent. Chiefly used in confection, also as a pill basis, and for making electuaries and linctuses.

(Brit. 1864, Lond. Edin.; Fr. Cynorrhodons; not in others.)

Preparation.

CONFECTIO.

Hips, 1; Refined Sugar, 2: beat the hips to a pulp in a stone mortar, rub the pulp through a sieve, add the sugar, and mix thoroughly. =(1 in 3).

(Brit. 1864; Lond. Edin. Belg. and Fr. Conserva Cynorrhodi; not in others.)

Dose.—1 drm. or more.

Used for Pilula Quiniæ.

ROSÆ CENTIFOLIÆ PETALA.

CABBAGE-ROSE PETALS.

The fresh petals, fully expanded, of the *Rosa centifolia;* from plants cultivated in Britain.

Medicinal Properties.

Slightly laxative, and sometimes given as a syrup combined with cathartics, but chiefly used in the preparation of rose-water.

(In all the Pharmacopœias; Pr. Flores Rosarum Incarnatarum; Fr. Rose Pâle.)

Preparation.

AQUA ROSÆ.

Fresh Petals, 1; Water, 2; distil 1. =(1 in 1).

An agreeable vehicle for medicines; employed in making lotions.

(Same as Brit. 1864, Lond. and Fr.; Edin. with a little Spirit; Dub. with Otto; U. S. and Belg. 1 in 2½; Austr. 1 in 3; Pr. 1 in 5.)

Dose.—1 to 2 oz.

An equivalent quantity of petals preserved whilst fresh with common salt may be used.

ROSÆ GALLICÆ PETALA.

RED ROSE PETALS.

The unexpanded petals of the *Rosa Gallica*, fresh and dried; cultivated in Britain.

Medicinal Properties.

Astringent. Often used on account of their colouring matter.

(In all the Pharmacopœias except Pr.)

Preparations.

CONFECTIO.

Fresh Red Rose Petals, 1; Refined Sugar, 3: beat the petals to a pulp in a stone mortar, add the Sugar, and beat well together. =(1 in 4).

Used as a pill basis. Applied to aphthous conditions of the mouth as a linctus.

(In all the Pharmacopœias, except Pr.; Fr. and Austr. with powdered Petals, Sugar, and Rose Water; U.S. with Honey.)

Dose.—½ to 1 drm., or more.

INFUSUM ROSÆ ACIDUM.

Red Rose Petals broken up, 1; Diluted Sulphuric Acid, ½; boiling Distilled Water, 40; infuse for half an hour with the acid and water: strain. =(1 in 40).

Astringent. An excellent vehicle for more powerful medicines. An agreeable gargle; but Borax and Alkalies change the colour to green.

(Same as Brit. 1864, Dub.; Lond. Edin. and U.S. made with Sugar; Fr. 1 in 100, without acid; not in others.)

Dose.—1 to 2 oz.

SYRUPUS.

Dried Rose Petals, 1; Refined Sugar, 15; boiling Distilled Water, 10: infuse the Petals in the Water two hours, squeeze through calico, heat the liquor to the boiling-point, and filter; add the Sugar and dissolve with heat. The product should weigh 23, and measure 17¼. Sp. g. 1·335.= (1 in 17¼).

Mildly astringent. Used to add to mixtures on account of its colour.

(Same as Brit. 1864; Edin. and Dub. stronger; Lond. and Fr. Sirop de Roses pâles; Belg. 1 in 10; U.S. 1 in 15; not in others.)

Dose.—1 to 2 drms.

Not Officinal.

INFUSUM ROSÆ CUM ACIDO NITRICO.—Rose Petals, broken small, 2; Dilute Nitric Acid, ½; cold Distilled Water, 40: infuse two hours, frequently stirring, strain and add Powdered Sugar, 1. Used for Quinine draughts.

Neither Sulphuric Acid nor a neutral Sulphate may be prescribed with Quinine in this infusion, for with either it will become turbid.

ROSMARINI OLEUM.

ENGLISH OIL OF ROSEMARY.

The Oil distilled from the flowering tops of *Rosmarinus officinalis.*

Sp. g. 0·911, reduced to 0·886 by rectification.

Soluble in Alcohol (sp. g. 0·887), 1 in 40.

Contained in Linimentum Saponis, Tinctura Lavandulæ Composita.

Medicinal Properties.

A powerful stimulant. Used in hysteria and nervous headaches; externally as a rubefacient, and for its odour.

(In all the Pharmacopœias except Edin. and Dub.; Fr. Huile Volatile de Romarin.)

Dose.—2 to 5 minims, in pill, Sugar, or emulsion.

Preparation.

SPIRITUS.

English Oil of Rosemary, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

($\frac{1}{5}$ the strength of Ph. Brit. 1864; Lond. 1 in 640; Edin. Austr. Fr. from flowering tops; Dub. Essentia Rosmarini; not in others.)

Dose.—10 to 30 minims.

Contained in Lin. Saponis Comp., Tinct. Lavand. Comp.

RUTÆ OLEUM.

ENGLISH OIL OF RUE.

The Oil distilled from the fresh herb of *Ruta graveolens.*

Medicinal Properties.

Stimulant and antispasmodic. Given in hysteria, convulsions, and amenorrhœa. A powerful topical stimulant and rubefacient.

(Brit. 1864, Lond. Edin. Fr. Austr. and Belg.; not in others.)

Dose.—2 to 6 minims in emulsion.

SABADILLA.

CEVADILLA.

The dried fruit of the *Asagræa officinalis,* imported from Vera Cruz and Mexico.

Medicinal Properties.

An acrid, drastic emeto-cathartic, operating occasionally with great violence; used as an anthelmintic in tænia, but Male Fern is safer and equally effective. May be used cautiously for pediculi.

Chiefly introduced into the Pharmacopœia for the purpose of making Veratria.

(Brit. 1864, Belg. Fr. Austr. and U. S.; not in others.)

Dose.—In powder, 4 to 6 grs.

SABINÆ CACUMINA.

SAVIN TOPS.

The fresh and dried tops of the *Juniperus Sabina,* collected in spring from plants cultivated in Britain.

Medicinal Properties.

A powerful local and general stimulant, diaphoretic, emmenagogue, and anthelmintic; used occasionally in gout and chronic rheumatism. The dried leaves, or powder, externally as a local stimulant or escharotic, applied to warts, flabby ulcers, etc. The expressed juice diluted, or an infusion, as a lotion for gangrenous sores, scabies, and tinea capitis.

(In all the Pharmacopœias, except Austr.)

Dose.—In powder, 5 to 10 grs. two or three times daily; the powder and tincture are convenient forms of administration.

Preparations.

OLEUM.

The Oil distilled in Britain from fresh Savin, sp. g. 0·915.

(Brit. 1864, Lond. Edin. U. S. Belg. Pr.; not in others.)

Dose.—1 to 5 minims.

TINCTURA.

Savin, recently dried and coarsely powdered, 1; Proof Spirit, 8: macerate forty-eight hours, with 6 of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, pour on the remaining spirit, press and filter, and add spirit to make 8. =(1 in 8).

(Same as Brit. 1864; Belg. 1 in 6.)

Dose.—15 to 30 minims.

UNGUENTUM.

Fresh Savin, bruised, 8; White Wax, 3; Prepared Lard, 16: melt the lard and the wax together, add the Savin, digest twenty minutes, strain and press. =(1 in $3\frac{3}{5}$).

Should be freshly prepared, as it does not keep.

To keep up suppuration from a blister or issue by preventing it from healing, and for application to indolent ulcers.

(Same as Brit. 1864; nearly as Lond. Edin. Ceratum Sabinæ, and Belg.; Dub. with powder; not in others.)

Antidotes.—In case of poisoning by Savin, emetics should first be given, and afterwards opiates and demulcents.

SACCHARUM PURIFICATUM.

REFINED SUGAR.

$C_{24}H_{22}O_{22}$, or $C_{12}H_{22}O_{11}$; eq. 342.

The crystallized refined juice of the stem of the *Saccharum officinarum;* cultivated in the West Indies and other tropical countries.

Solubility: in Water, 100 in 45, measures 113; in Rectified Spirit, 1 in 100.

Medicinal Properties.

Demulcent, used in catarrhal affections in the form of candy, syrup, etc. Employed in pharmacy to render oils miscible with water. Enters into the composition of several mixtures and pills, and all the confections, syrups, and lozenges.

Preparation.

SYRUPUS.

Refined Sugar, 6; Distilled Water, 3: dissolve the sugar in the water with the aid of heat, and when cool add water to weigh 9, and measure very nearly 7. Sp. g. 1·330. =(1 in $1\frac{1}{6}$).

(In all the Pharmacopœias.)

It is convenient to remember that 7 measures of Syrup contain 6 of Sugar.

SACCHARUM LACTIS.

SUGAR OF MILK.

$C_{24}H_{24}O_{24}$, or $C_{12}H_{24}O_{12}$; eq. 360.

Crystallized Sugar obtained from the Whey of Cow's Milk by evaporation; manufactured largely in Switzerland.

Solubility: in Cold Water, 1 in 5; Boiling Water, 1 in 3; slightly soluble in Rectified Spirit.

Sp. g. 1·540.

Medicinal Properties.

As a non-nitrogenous article of diet in consumption and other pulmonary diseases, and in cases of extreme irritability of the stomach, following profuse loss of blood. Used to mix with the food of children; dissolved in water, and mixed with cow's milk, it forms a good substitute for that of the mother. Useful for rubbing with strong medicinal powders, in order to divide them.

(In all the Pharmacopœias except Lond. and Edin.)

Dose.—1 to 2 drms. or more, in water.

Not Officinal.

SALICINUM.

SALICIN.

$C_{42}H_{20}O_{22}$; eq. 448.

A neutral substance obtained from the bark of the *Salix alba*.

In silky acicular crystals and laminæ, white, bitter, inodorous.

Solubility: in Water, 1 in 18.

Medicinal Properties.—Tonic, analogous to those of the Sulphate of Quinia, and less liable to irritate the stomach; employed in dyspepsia and intermittent diseases.

Dose.—5 to 10 grs.

SAMBUCI FLORES.

ELDER FLOWERS.

The fresh flowers of the *Sambucus nigra*, from indigenous plants.

Medicinal Properties.

Mildly stimulant. Externally, as a discutient, in the form of poultice, fomentation, or ointment.

Preparations.

AQUA.

Fresh Elder-flowers, separated from the stalks, 1; Water, 2: distil 1.

Or an equivalent quantity of flowers preserved whilst fresh with common Salt. =(1 in 1).

(Same as Brit. 1864; one-fourth stronger than Lond. and Edin.; Belg. ⅓ the strength; Austr. and Fr., with dried flowers, 1 in 4; not in others.)

Chiefly used as a perfume; it is, however, a pleasant vehicle for medicines, and may be used for lotions.

There is always a large quantity of vegetable matter in this water, which causes it to grow acid and impairs its odour. In practice it is better to distil it, of double strength and dilute when required.

Not Officinal.

UNGUENTUM.—Elder Flowers, fresh, and Lard, equal parts: melt the Lard, add the Flowers, continue the heat, stir for ten minutes, and strain.

(Same as Lond.; not in others.)

A cool, soothing application to irritable sores.

SANTONICA.

The unexpanded flower-heads of an undetermined species of *Artemisia*, imported from Russia.

Dose.—10 to 60 grs.

Brit. 1864, used to prepare Santoninum.

SANTONINUM.

SANTONIN.

$C_{30}H_{18}O_6$, or $C_{15}H_{18}O_3$; eq. 246.

A crystalline neutral principle, obtained from the *Artemisia Santonica* or *Semen contra*.*

In colourless, flat, rhombic prisms, feebly bitter.

Solubility: in Rectified Spirit, 1 in 50. Sparingly soluble in Water.

Test.—Not dissolved by diluted mineral acids. Entirely destructible by a red-heat with free access of air.

(Brit. 1864, Austr. Belg. Pr. U. S.; not in others.)

Medicinal Properties.

Anthelmintic. Being tasteless, it is a pleasant vermifuge for children. Useful both against tape-worm and thread-worms. Said to have been used with success in intermittents.

Dose.—2 to 6 grs. for children.

About three doses are sufficient; one every other night, followed by a brisk cathartic the morning after each dose.

SAPO.

SOAP.

Soaps embrace all those compounds which result from the reaction of salifiable bases with fats and oils.

* *Semen contra* is not a seed, but the unexpanded flower-heads of a species of *Artemisia*, imported from Russia, and is the only so-called worm-seed which yields Santonin in quantity worth extracting.

SAPO DURUS.

HARD OR WHITE CASTILE SOAP.

Soap made with Olive Oil and Soda.

Test.—Soluble in Rectified Spirit. Brit. Ph.

The author finds that of 30 grains of White Castile Soap digested for four days in 1 ounce of Rectified Spirit, only 24 grains are dissolved.

Medicinal Properties.

Laxative, antacid, and antilithic. Combined with Rhubarb, it is administered in dyspepsia attended with constipation and torpor of the liver. In large and frequent doses, it is most effective in removing gall-stones.

(In all the Pharmacopœias; Fr. Savon Blanc de Marseille.)

Dose.—5 to 15 grs.

Preparations.

EMPLASTRUM CERATI SAPONIS.

Hard Soap, 10; Bees' Wax, 12½; Oxide of Lead (in powder), 15; Olive Oil, 20; Vinegar, 160: boil the Vinegar with the Oxide over a slow fire, or by a steam bath, constantly stirring them until they unite; then add the Soap, and boil again in a similar manner until all the moisture is evaporated; lastly, mix with the Wax previously dissolved in the Oil, and continue the process till the product takes the consistence of a plaster.

(Same as Ceratum Saponis Comp. Lond.)

EMPLASTRUM SAPONIS.

Hard Soap, in powder, 6; Lead Plaster, 36; Resin, in powder, 1: to the Lead Plaster, previously melted, add the Soap and the Resin, first liquefied, then, constantly stirring, evaporate to a proper consistence.

=(1 of Soap in 7⅛).

(Same as Brit. 1864; nearly same as Lond.; Edin. 1 in 7; Dub. U. S. 1 in 10; Belg. 1 in 16; Pr. 1 in 15; Austr. Empl. Saponatum, 1 in 12½ with Camphor; Fr. 1 in 22.)

Rendered a little adhesive by the addition of Emplastrum Resinæ, it is spread on Amadou, and is useful to shield any part of the foot from pressure of the shoe.

LINIMENTUM SAPONIS.

Hard Soap, cut small, 2½ oz.; Camphor, 1¼ oz.; English Oil of Rosemary, 3 drms.; Rectified Spirit, 18 oz.; Distilled Water, 2 oz.: mix the water with the spirit, add the other ingredients, digest at a temperature not exceeding 70° F., agitating occasionally for seven days and filter.

=(1 in 10 nearly).

The temperature 70° was introduced in Brit. Ph. 1864 because it was found that when this temperature was exceeded, the liniment was always more or less gelatinous in cold weather, and could not be rendered bright again by warmth.

(Nearly same as Brit. 1864, Lond. Edin. and U. S.; Dub. without Rosemary; Austr. 1 in 5; Belg. 1 in 8; Pr. 1 in 15 with Ammonia; Fr. Lin Savonneux, 1 in 7, also Brit. Ph. formula.)

Contained in Linimentum Opii.

PILULA SAPONIS COMPOSITA.—*See* OPIUM, page 177.

1 gr. Opium powder in 6 nearly.

Not Officinal.

GLYCERINE SOAP, introduced by Carl Sarg, of Vienna, contains the largest amount of Glycerine, and is by far the purest and most transparent, as well as the most pleasant scented of any in use; JUNIPER TAR SOAP, BRECKNELL'S PURE YELLOW SOAP, OXIDE OF ZINC SOAP, CARBOLIC ACID SOAP, are occasionally prescribed for skin diseases.

STEER'S OPODELDOC is solid, and made as directed for Arnica Opodeldoc, substituting Sp. Rosemary for Tinct. Arnica.—*See* ARNICA, page 42.

SAPO MOLLIS.

SOFT SOAP.

Soap made with Olive Oil and Potash.

Test.—Soluble in Rectified Spirit; not imparting an oily stain to paper.

(Brit. 1864, Lond. and Edin.; Fr. Savon de Potasse; not in others.)

Contained in Linimentum Terebinthinæ.

SARSÆ RADIX.

JAMAICA SARSAPARILLA ROOT.

The dried root of the *Smilax officinalis*, native of Central America; imported from Jamaica. Brought into Europe about 1630.

Medicinal Properties.

Alterative and tonic. It is of especial service in secondary syphilis, alone or in combination with other remedies. Also in chronic rheumatism, with sudorifics and anodynes, and in cachectic diseases, chronic abscesses attended with profuse discharge, and many maladies connected with a depraved state of the system.

The virtues of Sarsaparilla have been much disputed, on account of the difficulty of explaining its action.

(In all the Pharmacopœias.)

Preparations.

DECOCTUM.

Jamaica Sarsaparilla, cut transversely, not split, 1; boiling Distilled Water, 12: digest for an hour, boil ten minutes, cool, strain, and add water to make up 8. The product should measure 8. =(1 in 8).

(Brit. 1864; about the same as Lond. Edin. Dub. and Belg.; not in others.)

Dose.—½ to 1 pint daily, in divided doses.

DECOCTUM COMPOSITUM.

Jamaica Sarsaparilla, not split, 20; Sassafras, in chips, 2; Guaiac Wood turnings, 2; fresh Liquorice Root, 2; Mezereon, 1; boiled Distilled Water, 240: digest for one hour, boil ten minutes, cool, and strain. The produce should measure 160. =(1 in 8).

(About the same as Brit. 1864, Lond. Edin. Dub. Fr. and U.S.; not in others.)

Dose.—½ to 1 pint daily, in divided doses.

EXTRACTUM LIQUIDUM.

Jamaica Sarsaparilla, cut transversely, 16 ; Distilled Water (temp. 160° F.), 280 ; Rectified Spirit, 1 : macerate in half the water for six hours and decant the liquor ; digest the residue in the remainder of the water for six hours more, mix the liquors, express and filter, evaporate by water-bath to 7 or until it has a sp. g. 1·130, when cold add the spirit. Sp. g. should be about 1·095. =(2 root in 1).

A fluid oz., which is equal to 16 oz. decoction, when evaporated produces ½ oz. of solid extract.

(Same as Brit. 1864 ; same strength as Lond. ; Pr. Decoctum Sarsaparillæ Concentratum ; Edin. and Dub. ¾ in 1 ; U. S. 1 in 1 ; not in others.)

Dose.—1 to 4 drms.

Not Officinal.

EXTRACTUM SARSÆ COMPOSITUM LIQUIDUM, Liquid Compound Extract of Sarsaparilla.—Jamaica Sarsaparilla, cut transversely, 16 oz. ; Sassafras, sliced, 2 oz. ; Guaiacum Wood, rasped, 2 oz. ; Liquorice Root, bruised, 2 oz. ; Mezereon, cut, 1 oz. ; Rectified Spirit, 1 oz. ; Distilled Water, 6 pints : macerate the first five ingredients in one half of the water, at a temperature not exceeding 160° F., for six hours, and decant the liquor ; digest the residue in the remainder of the water for the same time, and express ; filter the mixed liquors, and evaporate by a water-bath to 7 fluid ounces, when cold add the spirit. =(2 in 1).

Dose.—1 to 4 drms.

(Double the strength of U. S.)

INCOMPATIBLES.—Alkalies.

SASSAFRAS RADIX.

SASSAFRAS ROOT.

The dried root of the *Sassafras officinale*, from North America.

Medicinal Properties.

Stimulant and diaphoretic. Used as an adjuvant to other medicines, the flavour of which it improves, while it renders them more cordial to the stomach. Used in chronic rheumatism, cutaneous eruptions, scorbutic and syphilitic affections.

The bark of the root is now an article of commerce.

(Brit. 1864 ; Lond. Edin. Dub. Fr. and Belg. the Root ; U. S. the Root-bark ; not in others.)

Contained in Decoctum Sarsæ Compositum.

SCAMMONIUM.

SCAMMONY.

A Gum Resin obtained by incision from the living root of *Convolvulus Scammonia*, chiefly from Smyrna, in Asia Minor ; the juice, collected in shells, is suffered to concrete. The purest is known in commerce as Virgin Scammony.

Solubility : almost entirely dissolved in boiling diluted Rectified Spirit.

Test.—It does not effervesce with Hydrochloric Acid. Boiling Water, agitated with the powder, cooled and filtered, does not strike a blue colour with

tincture of Iodine—indicating absence of Starch. Ether removes from 80 to 90 per cent. of Resin; and what remains is chiefly soluble Gum with a little moisture.

Medicinal Properties.

A powerful drastic cathartic, apt to occasion griping. Usually given with Calomel, and its action is corrected by the Sulphate of Potassa. May be used in all cases of torpid bowels, and for removing scybala; also as a vermifuge for children.

(In all the Pharmacopœias, except Pr.)

Dose.—5 to 10 grs. of pure Scammony or of the Resin.)

Contained in Extractum Colocynthidis Compositum, Pilula Colocynthidis Composita, Pilula Colocynthidis et Hyoscyami.

Preparations.

CONFECTIO.

Scammony, in fine powder, 24; Ginger, in fine powder, 12; Oil of Caraway, 1; Oil of Cloves, ½; Syrup, 24; Clarified Honey, 12: rub the powders with the Syrup and the Honey into a uniform mass, then add the Oils, and mix. =(1 in 3).

(Same as Brit. 1864 and Dub.; Lond. about the same strength; not in others.)

Dose.—10 to 30 grs.

MISTURA.

Resin of Scammony, 4 grs.; Fresh Milk, 2 oz.: triturate and form an emulsion. =(1 in 240).

(Same as Brit. 1864; nearly as Edin.; Fr. Émulsion purgative avec le Scammonie, 1 in 200; not in others.)

Dose.—The quantity of the formula for an adult, half for a child.

PULVIS COMPOSITUS.

Scammony, 4; Jalap, 3; Ginger, 1: mix and reduce to fine powder. =(1 in 2).

(Same as Brit. 1864 and Fr.; nearly as Lond. Edin. Dub.; not in others.)

Dose.—10 to 20 grs.

SCAMMONIÆ RADIX.

The dried root of *Convolvulus Scammoniæ*, from Syria and Asia Minor.

Medicinal Properties.

An energetic cathartic. May be used when brisk action is needed, but on account of its griping properties it is rarely used alone. In combination, it promotes the action of other medicines, whilst its own harshness is mitigated.

(Brit. 1864.)

SCAMMONIÆ RESINA.

RESIN OF SCAMMONY.

Made by a patented process, and said to be equal to Virgin Scammony. A formula for its preparation is given in the British Pharmacopœia: it is

difficult, however, to obtain the root, and when obtained, it is a question whether the patentee would permit the Resin to be made.

It is soluble in Ether.

(Brit. 1864.)

Dose.—4 to 8 grs. in powder, or in emulsion with 3 or 4 oz. of milk.

Contained in Mistura Scammoniæ.

SCILLA.

SQUILL.

The bulb of the *Urginea Scilla*, from the Mediterranean coasts, sliced and dried.

Medicinal Properties.

A stimulant expectorant and diuretic. It increases the secretion of the bronchial mucous membrane and aids the expectoration of mucus. As an expectorant, it is used with Ipecacuanha and Ammoniacum; as a diuretic, generally given with Mercury.

(In all the Pharmacopœias; Pr. Bulbus Scillæ.)

Dose.—1 to 2 grs. of the powder.

Preparations.

ACETUM.

Dried Squill bruised, $2\frac{1}{2}$; diluted Acetic Acid, 20 oz.; Proof Spirit, $1\frac{1}{2}$: macerate the Squills in the Acid for seven days, then strain with expression and add the spirit and filter. =(1 in 8 nearly).

Dose.—15 to 40 minims.

(In all the Pharmacopœias.)

OXYMEL.

Vinegar of Squill, 5; Clarified Honey, 8: mix and evaporate till the sp. g. is 1·32.

(In all the Pharmacopœias except Edin. Dub. and U. S.)

Dose.—$\frac{1}{2}$ to 1 drm.

PILULA COMPOSITA.

Squill, in fine powder, $1\frac{1}{4}$; Ginger, in fine powder, 1; Ammoniacum in powder, 1; Hard Soap in powder, 1; Treacle, by weight, 2 or a sufficiency: mix the powders, add the Treacle and beat into a mass. =(1 in 5).

(Same as Brit. 1864, Dub. and Fr.; Edin. 1 in 4; Lond. and U. S. 1 in 9; Belg. 1 in 7; not in others.)

Dose.—5 to 10 grs.

SYRUPUS.

Vinegar of Squill, 20; Refined Sugar, 40: dissolve with the aid of heat.

(Nearly as Brit. 1864, Edin. Dub. Belg. Austr. U. S.; not in others.)

Dose.—$\frac{1}{2}$ to 1 drm.

TINCTURA.

Dried Squill, bruised, 1; Proof Spirit, 8: macerate for forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, let it drain,

and pour on the remaining spirit; when it ceases to drop, press, filter, and make up to 8. =(1 in 8).

(Same as Brit. 1864, Lond. Edin. Dub. and Fr.; U. S. 1 in 7½; (Belg. and Fr. 1 in 5; Pr. 1 and 6 by weight; not in Austr.)

Dose.—15 to 30 minims.

SCOPARII CACUMINA.

BROOM TOPS.

The fresh and dried tops of the *Sarothamnus scoparius*, from indigenous plants.

Medicinal Properties.

Diuretic and cathartic. Employed in dropsical complaints.

(Brit. 1864, Lond. Edin. Dub. U. S. Fr. Genêt; not in others.)

Preparations.

DECOCTUM.

Broom Tops, dried, 1; Distilled Water, 20: boil ten minutes and strain. The product should measure 20. =(1 in 20).

(Same as Dub.; nearly as Brit. 1864, Lond. and Edin. are compound; not in others.)

Dose.—2 to 4 oz.

SUCCUS.

Bruise fresh Broom Tops in a stone mortar, express the juice, and to every 3 add 1 of Rectified Spirit; set aside seven days and filter. Keep it in a cool place.

Dose.—1 to 2 drms.

(Same as Brit. 1864.)

SENEGÆ RADIX.

SENEGA ROOT.

The dried root of the *Polygala Senega*, from North America.

(In all the Pharmacopœias except Belg. and Fr.)

Medicinal Properties.

A stimulating expectorant and diuretic, and, in large doses, emetic and cathartic. Used in asthenic and chronic bronchitis, and in dysmenorrhœa and albuminuria.

Dose.—In powder, 15 to 20 grs.

Preparations.

INFUSUM.

Senega, bruised, 1; boiling Distilled Water, 20: infuse one hour and strain. =(1 in 20).

(Brit. 1864; Edin. and Dub. 1 in 16; Lond. Decoctum; Fr. Tisane de Polygala, 1 in 100; not in others.)

Dose.—1 to 2 oz.

TINCTURA.

Senega, bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and let it drain, pour on the remaining spirit; when the fluid ceases to drop, press, filter, and make up 8. =(1 in 8).

Dose.—½ to 2 drms.

(Same as Brit. 1864.)

SENNA.

SENNA.

The leaves of various species of *Cassia*. The British Pharmacopœia recognizes two kinds: the Alexandrian Senna (*Senna Alexandrina*, imported from Alexandria, being the leaves of the *C. lanceolata* and *C. obovata* carefully freed from the flowers, pods, and leaf-stalks; and the Tinnivelly Senna (*Senna Indica*), the leaves of the *C. elongata* from plants cultivated in southern India. The Alexandrian Senna must be free from admixture of leaves, flowers, and fruit of the Argel (*Solenostemma Argel*). The unequally oblique base and freedom from bitterness distinguish the Senna from Argel leaves, which are also thicker, greyer, and more wrinkled.

Medicinal Properties.

A general and efficient laxative in cases of occasional or habitual constipation. Given alone, it occasions griping and nausea; it is therefore best administered with aromatics. Used in dyspepsia, and in febrile and inflammatory diseases; but as it is somewhat drastic it must be avoided when the alimentary canal is much affected.

(In all the Pharmacopœias.)

The different kinds of Senna, freed from stalks, are of nearly equal medicinal value.

Dose.—Of powder, 10 to 30 grs.

Preparations.

CONFECTIO.

Senna, in fine powder, 7; Coriander, in fine powder, 3; Figs, 12; Tamarinds, 9; Cassia Pulp, 9; Prunes, 6; Extract of Liquorice, ¾; Refined Sugar, 30; Distilled Water, 24. Boil the Figs gently in the water four hours; express and strain; add water to make up 24: to this add the Prunes, boil four hours, then add the Tamarinds and Cassia; macerate a short time, and press the pulp through a hair sieve; dissolve the Sugar and Liquorice in the mixture with gentle heat, add the Senna and Coriander. The result should, according to Brit. Ph. 1864, weigh 60 = 1 in 8½, according to Brit. Ph. 1867, 75, which will make it 1 in 11 nearly.

(Same as Brit. 1864, Lond.; Edin. without Cassia and Tamarind; Dub. with Oil of Caraway, but without Liquorice and Figs; Belg. Electuarium Sennæ Comp.; Fr. Électuaire Lénitif, more complex; Pr. Electuarium Sennæ; not in others.)

Dose.—1 to 2 drms.

INFUSUM.

Senna, 1 oz.; Ginger, sliced, 30 grs.; boiling Distilled Water, 10 oz.: infuse one hour and strain. =(1 in 10).

(Same strength as Lond. Belg. and Fr. Brit. Ph. formula; Brit. 1864, Dub. 1 in 20; Edin. 1½ in 20; Austr. Inf. Laxativum with Manna, 1 in 8; Pr. Composita, 1 in 8, with Manna and Rochelle Salt; U. S. with Coriander, 1 in 16; not in others.)

Dose.—1 to 2 oz.

As this infusion quickly spoils by keeping in warm weather, the addition of 1 gr. of Nitre to each ounce will be found to impart great conservative power.

MISTURA COMPOSITA.

Infusion of Senna, 14; Sulphate of Magnesia, 4; Extract of Liquorice, ½; Tincture of Senna, 2½; Compound Tincture of Cardamoms, 1¼: dissolve and mix. =(1 Sulphate in 5).

A new preparation, to represent the Black Draught.

Dose.—1 to 1½ oz.

SYRUPUS.

Senna, broken small, 8 oz.; Oil of Coriander, 1½ minims; Refined Sugar, 12 oz.; Distilled Water, 50 oz., or a sufficiency; Rectified Spirit, 1 oz.: digest the Senna in three-fourths of the water twenty-four hours at a temperature of 120°, press, and strain; digest the marc in the remainder of the water six hours, press, and strain; evaporate the mixed liquors to 5 oz.; when cold, add the Rectified Spirit, containing the Oil of Coriander. Filter, and wash the filter with water to make up 8 oz.; add the Sugar, and dissolve with gentle heat. Should weigh 21, and measure 16. Sp. g. 1·310. =(1 in 2).

(Same as Brit. 1864; considerably stronger than Lond. and Edin.; Belg. and Pr. with Fennel and Manna; Austr. with Aniseed and Manna; not in others.)

Dose.—1 to 2 drms. Brit. Ph. dose, 1 to 4 drms.; for children, ½ to 1 drm. An excellent purgative, and pleasant to take.

TINCTURA.

Senna, broken small, 5; Raisins, freed from seeds, 4; Caraway, bruised, 1; Coriander, bruised, 1; Proof Spirit, 40: macerate the ingredients forty-eight hours in three-fourths of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, pour on the remaining spirit; press, filter, and make up 40. =(1 in 8).

(Same as Brit. 1864, and Fr.; Lond. 1 in 11; Edin. and Dub. 1 in 10; Belg. 1 in 5½; not in others.)

Dose.—2 to 8 drms.

SERPENTARIÆ RADIX.

SERPENTARY ROOT.

The dried rhizome of the *Aristolochia Serpentaria*, from the southern part of North America.

Medicinal Properties.

Stimulant, tonic, and diaphoretic. A valuable remedy in the low stage of typhus, combined with Sesquicarbonate of Ammonia, given when the tongue

is dry and brown or black, and the pulse low. Used in dyspepsia and chronic rheumatism.

(In all the Pharmacopœias.)

Dose.—Of the powder 10 to 15 grs.

Preparations.

INFUSUM.

Serpentary, 1; boiling Distilled Water, 40: infuse two hours, and strain. =(1 in 40).

(Same as Brit. 1864, Lond. and Edin.; U. S. 1 in 32; not in others.)

Dose.—1 to 2 oz.

TINCTURA.

Serpentary, bruised, 1; Proof Spirit, 8: macerate forty-eight hours, with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain; pour on the remaining spirit, and when it ceases to drop, press, and wash the marc to make 8. =(1 in 8).

(Same as Brit. 1864, Lond. Edin. 1 in 11; U. S. 1 in $7\frac{5}{8}$; Belg. 1 in $5\frac{1}{2}$; not in others.)

Dose.—$\frac{1}{2}$ to 2 drms.

SEVUM PRÆPARATUM.

PREPARED SUET.

The internal fat of the abdomen of the sheep, purified by melting and straining.

Contained in Emplastrum Cantharidis and Unguentum Hydrargyri.

(In all the Pharmacopœias except Austr. Dub. and Pr.; Fr. Suif de Mouton.)

Not Officinal.

SIMARUBA.

BITTER SIMARUBA, OR MOUNTAIN DAMSON.

The root bark of the *Simaruba officinalis*, from the West Indies.

Medicinal Properties.—A bitter tonic. In large doses causes nausea; is diaphoretic and diuretic. Principally used in the asthenic and chronic form of dysentery; may be combined with opium in epidemic dysentery, and in the advanced stages of diarrhœa.

Dose.—15 to 30 grs.

Preparation.

INFUSUM.

Simaruba, bruised, 3 drms.; boiling Water, 1 pint: infuse two hours and strain. =(1 in 53).

(Same as Edin.; Dub. and Fr. 1 in 32; not in others.)

Dose.—1 to 2 oz.

SIMABA CEDRON Seeds possess this bitter in an eminent degree, and well deserve a therapeutic trial. Dose of the powder: 1 to 3 grs.

This infusion does not tinge the preparations of Iron.

SINAPIS.

MUSTARD.

The seeds of the *Sinapis nigra* and *S. alba* reduced to powder, mixed.

Test.—A decoction cooled is not made blue by Tincture of Iodine—indicating absence of Starch.

Medicinal Properties.

Powerfully stimulant; swallowed whole as a laxative. The powder as an emetic, or as a rubefacient.

(In all the Pharmacopœias.)

Preparations.

CATAPLASMA.

Mustard, in powder, 2½; Linseed Meal, 2½; boiling Water, 10: mix the Linseed Meal with the water, and add the Mustard, constantly stirring.

Used as a counter-irritant in inflammation, neuralgic pains; also in spasms.

(Same as Brit. 1864 and Lond.; Fr. Cataplasme Rubifiant, with Mustard only; not in others.)

LINIMENTUM COMPOSITUM.

Oil of Mustard, 1 drm.; Ethereal Extract of Mezereon, 40 grs.; Camphor, 2 drms.; Castor Oil, 5 drms.; Rectified, 32 drms.: dissolve. =(1 in 40).

A stimulating liniment.

A new preparation.

OLEUM.

The Oil distilled with water from the seeds of Black Mustard. Sp. g. 1·015.

Solubility in water, 1 in 50, readily in Rectified Spirit and Ether, applied to the skin it produces almost instant vesication.

Contained in Linimentum Compositum.

(In Pr.; not in others.)

A new preparation.

Not Officinal.

Sinapine Paper owes its efficacy chiefly to Capsicine.

SODIUM.

SODIUM.

Na; eq. 23.

The metallic base of the alkali Soda, discovered by Sir Humphry Davy in 1807, is a soft, malleable, sectile solid, of a silver-white colour, possessing a high degree of metallic lustre, which quickly tarnishes on exposure to the air. Like Potassium, it has a strong affinity for Oxygen: when thrown on cold water, it instantly fuses to a globule, without combustion, and traverses the surface in all directions; on hot water it inflames. Sp. g. 0·970.

There are no direct officinal preparations of Sodium; its oxide alone is salifiable, from which are derived the preparations of the Pharmacopœia. The Chloride of Sodium is obtained by dissolving Rock Salt in water, and recrystallizing it; some, however, absolutely pure and perfectly white, is found imbedded in the common brown Rock Salt.

From the Chloride the Carbonate is now prepared, from which all the other preparations of Soda are made.

The following are the preparations of Soda given in the British Pharmacopœia:—

Page 227.	SODA CAUSTICA.	
„ 228.	SODA TARTARATA	Dose, 2 to 4 drms.
„ 229.	SODÆ ACETAS.	
„ 229.	SODÆ ARSENIAS	„ $\frac{1}{16}$ to $\frac{1}{8}$ gr.
„ 229.	SODÆ ARSENIATIS LIQUOR	„ 5 to 10 minims.
„ 53.	SODÆ BIBORAS.—*See* BORAX.	
„ 230.	SODÆ BICARBONAS	„ 10 to 30 grs.
„ 231.	SODÆ CARBONAS.	
„ 231.	SODÆ CARBONAS EXSICCATA	„ 3 to 10 grs.
„ 231.	SODÆ CHLORATÆ LIQUOR.	„ 10 to 20 minims.
„ 232.	SODÆ CITRO-TARTRAS EFFERVESCENS	„ 1 to 2 drms.
„ 230.	SODÆ EFFERVESCENS LIQUOR . . .	„ 4 to 8 oz.
„ 228.	SODÆ LIQUOR.—*See* SODA CAUSTICA . .	„ $\frac{1}{2}$ to 1 drm.
„ 233.	SODÆ NITRAS.	
„ 233.	SODÆ PHOSPHAS	„ $\frac{1}{4}$ to 1 oz.
„ 233.	SODÆ SULPHAS	„ $\frac{1}{2}$ to 1 oz.
„ 234.	SODÆ VALERIANAS	„ 1 to 5 grs.
„ 234.	SODII CHLORIDUM.	

Preparations of Soda not officinal are to be found in the Index.

SODA CAUSTICA.

CAUSTIC SODA.

Hydrate of Soda, NaO,HO; or **NaHO**, eq. 40.

In hard, greyish-white fragments of cakes, very alkaline and corrosive.

Procured by boiling down solution of Soda rapidly in a silver or clean iron vessel, until there remains a fluid of oily consistence, a drop of which, when removed on a warmed glass rod, solidifies on cooling. Pour the fluid on a clean silver or iron plate, and as soon as it has solidified break it in pieces.

Solubility: in water, 1 in 1.

Test.—40 grains dissolved in water leave scarcely any sediment, and require for neutralization about 900 grain-measures of the volumetric solution of Oxalic Acid.

(Brit. 1864; not in others.)

Preparation.

LIQUOR SODÆ.

Carbonate of Soda, 7; Slaked Lime, 3; Distilled Water, 40; dissolve the carbonate in the water, boil in a clean iron vessel, gradually mixing the lime and stirring constantly for ten minutes; decant into a green glass bottle, with air-tight stopper.

Test.—Sp. g. 1·047. 1 fluid ounce (458 grains by weight) requires for neutralization 470 grain-measures of the volumetric solution of Oxalic Acid. It does not effervesce when added to an excess of dilute Hydrochloric Acid, nor give a precipitate with Lime or Oxalate of Ammonia—indicating absence of Carbonic Acid and Lime. When it is heated with an excess of dilute Nitric Acid, and evaporated to dryness, the residue forms with water a clear solution, which is rendered turbid by Chloride of Barium and by Nitrate of Silver, but not by Ammonia—indicating absence of Magnesia.

100 grains contain 4 grains Hydrate of Soda = 18·8 grs. to the 1 oz. of Solution.

Medicinal Properties.

Antacid, used in preference to Potash in some stomach diseases.

(Lond. sp. g. 1·061; Dub. 1·056; Fr. Soude Caustique Liquide, sp. g. 1·330; Belg. and Pr. Natrum Hydricum Solutum, 1·330 to 1·334, containing 24 per cent.; U. S. 1·071, and contains 5·7 per cent. of Hydrate of Soda; not in Austr.)

Dose.—½ to 1 drm.

ANTIDOTES.—Same as Liquor Potassæ, page 195.

SODA TARTARATA.

TARTRATE OF SODA AND POTASH.

Syn. ROCHELLE SALT.

$NaO,KO,C_8H_4O_{10}+8HO$; or $NaKC_4H_4O_6,4H_2O$; eq. 282.

In colourless transparent prisms, or halves of prisms of the right-rhombic order, generally eight-sided; tasting like common salt.

Solubility: in water, 1 in 2; insoluble in Rectified Spirit.

Test.—Entirely soluble in cold water. 141 grains heated to redness till gases cease to be evolved leave an alkaline residue (carbonates), which requires for neutralization 1000 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

A mild, cooling purgative, well suited to delicate and irritable stomachs. It is not aperient in small doses, its action being to render the urine alkaline.

(In all the Pharmacopœias; Pr., Natro-Kali Tart. vel Sal Polychristum Seignetti).

Dose.—2 to 4 drms.

Not Officinal.

SEIDLITZ POWDER.—Rochelle Salt, 2 drms.; Bicarbonate of Soda, 40 grs.: mix. In a separate powder, 37 grains of Tartaric Acid.

SODÆ ACETAS.

ACETATE OF SODA.

$NaO,C_4H_3O_3+6HO$; or $Na_3C_2H_3O_2,3H_2O$, eq. 182.

Used to prepare Ferri Arsenias, Ferri Phosphas, Syrupus Ferri Phosphatis.

SODÆ ARSENIAS.

ARSENIATE OF SODA.

$2NaO,HO,AsO_5+14HO$; or $Na_2HAsO_4,7H_2O$, eq. 312.

In colourless transparent prisms.

Arsenious Acid, 10; Nitrate of Soda, 8½; dried Carbonate of Soda, 5½; boiling Distilled Water, 35. Reduce the dry ingredients separately to fine powder, and mix them thoroughly in a porcelain mortar; put the mixture into a crucible, and cover it with a lid; expose it to a full red-heat till all effervescence has ceased and complete fusion has taken place; pour out the fused salt on a clean flagstone, and, as soon as it has solidified, and while it is still warm, put it into the boiling water, stirring diligently. When the salt is dissolved filter the solution, and set aside to crystallize; drain and dry the crystals, and enclose in stoppered bottles.

Solubility: in water, 1 in 2.

Test.—Heated to 300°, it loses 40·38 per cent. of its weight. A watery solution of 10 grains of the residue, heated with 53 grain-measures of the volumetric solution of Soda, continues to give a precipitate with the volumetric solution of Nitrate of Silver until 1613 grain-measures of the latter have been added. This precipitate is Arseniate of Silver, and proves that the proper quantity of Arsenic Acid is present.

(Brit. 1864; Belg. dried Salt; Fr. crystallized; not in others.)

6·6 grains of the crystals yield 4 grains of Anhydrous Salt.

Dose.—$\frac{1}{16}$ to $\frac{1}{8}$ grain.

Preparation.

LIQUOR.

Arseniate of Soda (rendered anhydrous by a heat not exceeding 300° F.), 4 grs.; Distilled Water, 1 oz.: dissolve. =(1 in 120).

Dose.—2 to 5 minims. Br. Ph. dose, 5 to 10 minims.

Differs in strength from Pearson's Solution.

(Brit. 1864; Belg. dried salt 1 in 600; and Fr. crystallized 1 in 600.) The latter is Pearson's Solution; dose, 5 to 10 minims. Fr. has also the Br. Ph. formula.

Medicinal Properties.

Similar to those of the Arsenite of Potash, or Fowler's Solution. Used in skin and nervous diseases. It cures eczema more speedily than Liquor Arsenicalis, producing less gastric disturbance and less irritability of the conjunctiva.

It is of about the same strength as Liquor Arsenicalis.

Dose.—5 to 10 minims, carefully increased.

ANTIDOTES.—*See* Acidum Arseniosum, page 4.

SODÆ BICARBONAS.

BICARBONATE OF SODA.

$NaO,HO,2CO_2$; or, $NaHCO_3$, eq. 84.

In powder, or small opaque irregular scales, white, of a saline not unpleasant taste.

Solubility: in Water, 1 in 10.

Test.—When supersaturated with Nitric Acid, its solution scarcely precipitates with Chloride of Barium or Nitrate of Silver—indicating a mere trace of sulphate and chloride. 84 grains, exposed to a red heat, leave 53 grains of alkaline residue (carbonate), which requires for neutralization 1000 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

Analogous to those of the Bicarbonate of Potash; it is less caustic and irritating than Carbonate of Soda. Employed as an antacid in dyspepsia. Useful in calculus with excess of Uric Acid: the Bicarbonate of Potash, however, is preferable, as it forms soluble salts with Uric Acid. It is a resolvent or alterative in some forms of inflammations, glandular affection, syphilis, and scrofula, and a diuretic in dropsy. Moistened with water, is an excellent application to the sting of wasps and gnats.

(In all the Pharmacopœias; Fr. Bicarbonate de Soude; Austr. et Pr. Natrum Bicarbonicum; Belg. Natrum Bicarbonicum Acidulum.)

Dose.—10 to 30 grains.

TROCHISCI.

Bicarbonate of Soda, in powder, 3600 grs. = $8\frac{1}{4}$ oz.; Refined Sugar, 25 oz.; Gum Acacia, in powder, 1 oz.; Mucilage, 2 oz.; Distilled Water, 1 oz.: mix, and form into 720 lozenges.

Each lozenge contains 5 grains of Bicarbonate of Soda.

Dose.—1 to 6 loz.

Not Officinal.

PULVIS SALINUS ANTICHOLERICUS (Dr. Stevens).—Bicarbonate of Soda, 30 grs.; Chloride of Sodium, 20 grs.; Chlorate of Potash, 7 grs.: for one dose.

Given frequently in a small tumbler of cold water, to arrest the pain and purging.

PESSARY (Antacid).—Bicarbonate of Soda, 15 grs.; Oil of Theobroma, sufficient for one pessary.

LIQUOR SODÆ EFFERVESCENS.

Syn. SODA WATER.

Bicarbonate of Soda, 30 grs.; Water, 20 oz.: dissolve and filter, and pass through it as much Carbonic Acid Gas (obtained by the action of Sulphuric Acid on Chalk) as can be introduced by the pressure of seven atmospheres; bottle, and secure the corks with wire.

Each half-pint bottle contains 15 grains.

SODÆ CARBONAS.

CARBONATE OF SODA.

NaO,CO_2+10HO, eq. 143; or $Na_2CO_3,10H_2O$, eq. 286.

In transparent, colourless, laminar crystals of a rhombic shape, containing 63 per cent. of water of crystallization, efflorescent, with a harsh alkaline taste, and strong alkaline reaction.

Solubility: in Water, 1 in 2. Insoluble in Rectified Spirit.

(In all the Pharmacopœias; Fr. Carbonate de Soude crystallisé.)

Native Carbonate of Soda is found chiefly in Hungary, Egypt, and South America, existing either in the earth or in small lakes, whence it is procured by evaporation.

Soda has been largely procured from the combustion of marine vegetables, which furnishes the impure alkalis kelp and barilla, whence it is extracted by the process of lixiviation and crystallization.

It is, however, chiefly procured from sea-salt, by converting the salt by Sulphuric Acid into Sulphate of Soda, then by decomposing the sulphate by Carbonate of Lime and Charcoal at a high temperature. This process was discovered in 1784 by Leblanc.

Test.—When supersaturated with Nitric Acid it precipitates only slightly or not at all with Chloride of Barium or Nitrate of Silver—indicating a trace of Sulphate and Chloride. 143 grains require for neutralization at least 960 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

Antacid, antilithic, and resolvent. Given principally in diseases attended with acidity of the stomach, as gout and dyspepsia.

Dose.—10 to 30 grs. in powder, or in bitter infusion.

Preparation.

SODÆ CARBONAS EXSICCATA. NaO,CO_2, eq. 53; or Na_2CO_3, eq. 106.

Expose the Carbonate of Soda in a porcelain capsule to a rather strong sand-heat, until the liquor first formed becomes a dry cake. Reduce to powder.

53 grains are equal to 143 grains of crystallized salt.

Dose.—3 to 10 grains three times daily in pill, with soap and aromatics.

(In all the Pharmacopœias except Fr.)

Not Officinal.

BALNEUM ALKALINUM.—Crystals of Carbonate of Soda, 8 or 10 oz. to 60 gallons of Water.

Used in skin diseases as a more effective means of cleansing than by soap.

SODÆ CHLORATÆ LIQUOR.

SOLUTION OF CHLORINATED SODA.

A mixed solution of Hypochlorite of Soda, Na,O,ClO, Chloride of Sodium, and Bicarbonate of Soda.

Carbonate of Soda, 12; Black Oxide of Manganese, in powder, 4; Hydrochloric Acid, 15; Distilled Water, 40: dissolve the powdered Carbonate of Soda in 36 parts of the water in a glass vessel. Mix the Oxide of Man-

ganese and Hydrochloric Acid, and place them in a retort, or glass flask with a bent tube attached by means of a cork to its mouth. Heat the mixture gradually, and pass the evolved Chlorine through a wash-bottle containing 4 of the water, and afterwards into the solution of Carbonate of Soda. When the disengagement of Chlorine has ceased, transfer the solution to a stoppered bottle, and keep it in a cool and dark place.

Test.—Sp. g. 1·103. 1 drachm (70 grains by weight) added to a solution of 20 grains of Iodide of Potassium in 4 ounces of water, and acidulated with 2 drachms of Hydrochloric Acid, requires for the discharge of the brown colour which the mixture assumes 500 grain-measures of the volumetric solution of Hyposulphite of Soda. It is not precipitated by Oxalate of Ammonia—indicating absence of Lime.

Test explained under Calx Chlorata.

Medicinal Properties.

Stimulant, antiseptic, and resolvent. Used internally in typhus, scarlatina, etc., indicated by great prostration of strength, fetid evacuations, dry and furred tongue; in dysentery, dyspepsia; also in glandular enlargements, and chronic mucous discharges. Locally, in all affections attended with fœtor, and may be applied, diluted, as a gargle, wash, poultice, or by lint. An excellent application to sore nipples. It is also a powerful disinfecting agent, used in preference to Chloride of Lime, because, when the Chlorine has escaped, the lime is left in a caustic condition, and acts corrosively on carpets, etc.

(Same as Brit. 1864 and Lond.; Dub. uses 12 Chlorinated Lime, 10½ Crystallized Carbonate of Soda, 120 Water—mix and decant; U. S. Belg. Fr. (Hypochlorite de Soude liquide), have 12 Chlorinated Lime, 24 Carbonate of Soda, but a variable quantity of Water; not in others.)

Dose.—10 to 20 minims.

Preparation.

CATAPLASMA SODÆ CHLORATÆ.

Solution of Chlorinated Soda, 1; Linseed Meal, 2; boiling Water, 4: add the Linseed Meal gradually to the water, stirring constantly, then mix the solution of Chlorinated Soda.

(Brit. 1864 and Lond.; not in others.)

SODÆ CITRO-TARTRAS EFFERVESCENS.

EFFERVESCENT CITRO-TARTRATE OF SODA.

Popular Name, Granular Effervescent Magnesia.

Bicarbonate of Soda, in powder, 17; Tartaric Acid, in powder, 8; Citric Acid, in powder, 6: mix the powders thoroughly, place them in a dish or pan of a suitable form heated to between 200° and 220°, and when the particles of the powder begin to aggregate, turn them assiduously until they assume a granular form, then by means of a suitable sieve separate the granules of uniform and most convenient size, and preserve them in well-stoppered bottles.

Dose.—1 to 2 drms.

(Fr. Limonade sèche au Citrate de Magnésie.)

New preparation; vulgo, Granular Effervescent Citrate of Magnesia.

SODÆ NITRAS.

NITRATE OF SODA.

NaO,NO_5, or $NaNO_3$; eq. 85.

A native Salt, purified by crystallization from water.

Used only to prepare Sodæ Arsenias.

SODÆ ET POTASSÆ TARTRAS. *See* SODA TARTARATA.

SODÆ PHOSPHAS.

PHOSPHATE OF SODA.

$2NaO,HO,PO_5+24HO$; or $Na_2HPO_4,12H_2O$, eq. 358.

In transparent, colourless, rhombic prisms, terminating by four converging planes, efflorescent, tasting like common salt.

Solubility: in water, 1 in 5.

Test.—Heated to dull redness it loses 63 per cent. of its weight, leaving a residue, which, when dissolved in water, gives, with Chloride of Barium, a precipitate entirely soluble in dilute Nitric Acid: Phosphate of Baryta.

Medicinal Properties.

A mild purgative; from its pure saline taste it is called tasteless Aperient Salt; it is well suited to children and persons of delicate stomach. Diuretic in small doses.

(In all the Pharmacopœias; Pr. Natrum Phosphoricum; Fr. Phosphate de Soude.)

Dose.—$\frac{1}{4}$ to 1 oz.

Best given in gruel or weak broth.

Not Officinal.

SODÆ HYPOPHOSPHITIS SOLUTIO.—Sodæ Hypophosphis, in crystals. Dose, 5 to 10 grs. in water, as a nervine tonic. *Vide* Phosphorus, page 182.

Swan's Solution is 3 grs. to the drachm.

5 lbs. of the salt dissolved in 100 gallons of water was recommended for the ordinary drink for cattle as a preventive to Cattle Plague.

SODÆ SULPHAS.

SULPHATE OF SODA, GLAUBER SALT.

NaO,SO_3+10HO, eq. 161; or $Na_2SO_4,10H_2O$, eq. 322.

In transparent oblique rhombic prisms, has a cool saline and bitter taste, effloresces on exposure to air.

Solubility: in water 1 in 3, and measures $3\frac{1}{2}$.

Medicinal Properties.

An excellent cooling aperient.

Dose.—$\frac{1}{2}$ to 1 oz.

100 Sulphate of Soda exposed to heat in a crucible lose 55·9 per cent. of water.

Not Officinal.

Sodæ Sulphis.—Prepared by saturating a solution of Carbonate of Soda with pure Sulphurous Acid.

It crystallizes in white transparent prisms.

Solubility: in water, 1 in 4.

Given with success for sarcina ventriculi.

Dose.—10 to 60 grs.

Sodæ Hyposulphis.—Prepared by digesting a solution of sulphite with sulphur, or by passing Sulphurous Acid gas through a solution of Sulphide of Sodium.

It crystallizes in prisms, which have a bitter saline taste, inodorous.

Solubility: in water freely, but not in alcohol.

It is given for sarcina ventriculi, also in scrofulous, syphilitic, and rheumatic affections, sometimes used as a lotion for parasitic skin diseases (1 oz. to a gallon of water).

Dose.—10 to 60 grs.

Depilatory.—Sulphuret of Sodium, 3; Quicklime in powder, 10; Starch 10: mix.

SODÆ VALERIANAS.

VALERIANATE OF SODA.

$NaO,C_{10}H_9O_3$; or $NaC_5H_9O_2$, eq. 124.

In dry white masses without alkaline reaction.

Solubility: entirely in Alcohol.

Dose.—1 to 5 grs.

Used chiefly to prepare Valerianate of Zinc.

SODII CHLORIDUM.

SALT.

Syn. Sodæ Murias.

NaCl, or NaCl; eq. 58·5.

In small, white, crystalline grains, or transparent cubic crystals.

Solubility of pure Rock Salt in water, 1 in $2\frac{3}{4}$.

Test.—Free from moisture. The solution is not rendered hazy by Chloride of Barium nor by Phosphate of Soda, after the addition of a mixed solution of Ammonia and Hydrochlorate of Ammonia. The addition of Solution of Ammonia and Hydrochlorate of Ammonia is to produce with Magnesia, if it be present, Ammonio-phosphate of Magnesia.

Medicinal Properties.

In small doses, stimulant, tonic, and anthelmintic; in larger doses, purgative and emetic. It is also antiperiodic in doses of 8 or 12 drachms during the intervals. Locally, as a fomentation to sprains and bruises. As a saltwater-bath (1 pound to 4 gallons), a tonic and excitant of the system, especially in children.

(In all the Pharmacopœias except Pr.; Fr. Chlorure de Sodium.)

Dose.—10 grs. to 1 drm. as a tonic; 2 to 4 drms. as a cathartic.

SPIRITUS.

SPIRIT.

All substances which have undergone the vinous fermentation, and in which it is not completely over, contain Alcohol ready formed, which is separated by distillation. The various kinds are distinguished by varieties of flavour and colour. The redistillation of these produces Rectified Spirit.

When spirit is distilled with aromatic vegetables containing volatile oil, the oil rises for the most part with the spirituous vapour and condenses along with it in a state of solution.

The Spirits which were in former Pharmacopœias and omitted from the British are :—Spiritus Ætheris Compositus, Lond.; Ætheris Oleosus, Dub.; Ammoniæ, Edin.; Anisi, Lond.; Carui, Lond. Edin.; Cassiæ, Edin.; Cinnamomi, Lond. Edin.; Lavandulæ Comp. (*see* TINCT. LAVANDULÆ COMP.); Menthæ Viridis, Lond.; Menthæ Pulegii, Lond.; Pimentæ, Lond. Edin.

The Spirits of the British Pharmacopœia are as follows: the formulæ will be found under the names of the drugs from which they are prepared :—

	Dose.		Proportion of active ingredients to the whole.
Page 19.	30 min.	SPIRITUS ÆTHERIS	1 in 3.
235.	½ drm.	SPIRITUS ÆTHERIS NITROSI.	
28.	20 min.	SPIRITUS AMMONIÆ AROMATICUS.	
29.	½ drm.	SPIRITUS AMMONIÆ FŒTIDUS.	
41.	1 drm.	SPIRITUS ARMORACIÆ COMP. . .	1 in 8.
56.	30 min.	SPIRITUS CAJUPUTI . . . . (Oil)	1 in 50.
63.	10 min.	SPIRITUS CAMPHORÆ	1 in 10.
79.	10 min.	SPIRITUS CHLOROFORMI	1 in 20.
145.	30 min.	SPIRITUS JUNIPERI . . . . (Oil)	1 in 50.
149.	30 min.	SPIRITUS LAVANDULÆ . . . „	1 in 50.
163.	30 min.	SPIRITUS MENTHÆ PIPERITÆ „	1 in 50.
170.	30 min.	SPIRITUS MYRISTICÆ . . . „	1 in 50.
236.	Sp. g. 838.	SPIRITUS RECTIFICATUS (16 per cent. of water).	
213.	10 min.	SPIRITUS ROSMARINI. . . . (Oil)	1 in 50.
237.	Sp. g. 920.	SPIRITUS TENUIOR (Rect. Sp. 5, Water 3).	
237.		SPIRITUS VINI GALLICI (containing 48 to 50 per cent. of Alcohol).	

Alcohol is placed in the Appendix, and Alcohol Amylicum will be found in the Index.

SPIRITUS ÆTHERIS NITROSI.

SPIRIT OF NITROUS ÆTHER.

Syn. SPIRITUS ÆTHERIS NITRICI, *Lond. Edin.*

A spirituous solution containing Nitrous Ether, C_4H_5O,NO_3, or $C_2H_5NO_2$; eq. 75.

Nitric Acid (sp. g. 1·420), 3; Sulphuric Acid, 2; Copper, in fine wire (No. 25), 2; Rectified Spirit, a sufficiency: to 20 of the spirit add gradually

the Sulphuric Acid, stirring them together; then add to this, also gradually, 2½ of the Nitric Acid. Put the mixture into a retort or other suitable apparatus, into which the Copper wire has been introduced, and to which a thermometer is fitted. Attach now an efficient condenser, and applying a gentle heat, let the spirit distil at a temperature commencing at 170° and rising to 175°, but not exceeding 180°, until 12 have passed over and been collected in a bottle kept cool, if necessary, with ice-cold water; then withdraw the heat, and having allowed the contents of the retort to cool, introduce the remaining ½ of Nitric Acid, and resume the distillation as before, until the distilled product has been increased to 15. Mix this with 40 of the Rectified Spirit, or as much as will make the product correspond to the tests of specific gravity and percentage of Ether separated by Chloride of Calcium. Preserve it in well-closed vessels.

Characters and Tests.—Transparent and nearly colourless, with a very slight tinge of yellow, mobile, inflammable, of a peculiar penetrating apple-like odour, and sweetish, cooling, sharp taste. It effervesces feebly or not at all when shaken with a little Bicarbonate of Soda. When agitated with solution of Sulphate of Iron and a few drops of Sulphuric Acid, it becomes deep olive-brown or black. If it be agitated with twice its volume of saturated solution of Chloride of Calcium in a closed tube, two per cent. of its original volume will separate in the form of Nitrous Ether, and rise to the surface of the mixture.

Sp. g. 0·845.

Medicinal Properties.

Stimulant, diaphoretic, and diuretic. Useful in dropsy and catarrh.

Dose.—½ to 2 fluid drms.

(Brit. 1864, Sp. Ætheris Nitrici, sp. g. ·834; Edin. ditto, sp. g. ·847; Austr. sp. g. ·830; Dub. Sp. Ætherеus Nitrosus; Fr. Esprit de Nitre Dulcifié, a mixture of Nitric Acid 1, Alcohol 3, both by weight; Belg. Æther Nitricus Alcoholicus, sp. g. ·850; U. S. sp. g. ·837; not in Pr.)

Incompatibles.—Iodide of Potassium, Sulphate of Iron, alkaline and earthy carbonates, Tincture of Guaiacum. Emulsions are curdled by its addition.

SPIRITUS RECTIFICATUS.

RECTIFIED SPIRIT.

Alcohol, C_4H_5O,HO, with 16 per cent. of water; obtained by the distillation of the fermented saccharine fluids, and by the rectification of the product, if it be not of proper density.

Test.—Sp. g. 0·838. Remains clear when diluted with Distilled Water. Odour and taste purely alcoholic. 4 ounces with 30 grain-measures of the volumetric solution of Nitrate of Silver, exposed for twenty-four hours to bright light and then decanted from the black powder which has formed, undergoes no further change when again exposed to light with more of the test.

These tests are intended to discover the presence of Fusel Oil, and the quantity of it.

Medicinal Properties.

Internally a powerful diffusible stimulant. Used in some states of acute

disease characterized by excessive debility. Externally applied, diluted to produce cold by evaporation; when evaporation is repressed it acts as a stimulant. Diluted, it forms a lotion for erysipelas, erythema, burns and scalds while the cuticle is entire, and for sprains and recent bruises.

(In all the Pharmacopœias.)

Preparations.

SPIRITUS TENUIOR. Proof Spirit.

Rectified Spirit, 5; Distilled Water, 3: mix.

Sp. g. 0·920.

(In all the Pharmacopœias. Same as Lond. and Dub.; Edin. 0·912; U. S. 0·941: Belg. 0·878; Austr. 0·913; Fr. 0·923; Pr. 0·890 to 0·894, containing 70 per cent. by measure.)

SPIRITUS VINI GALLICI.

French Brandy. 48 to 56 parts of Alcohol.

MISTURA SPIRITUS VINI GALLICI.

Brandy, 4 oz.; Cinnamon Water, 4 oz.; the yolks of 2 Eggs; Sugar, ½ oz.: mix.

(Same as Lond.)

A delicious dose in cases of prostration or last stages of fever.

Dose.—½ to 1½ oz.

Stimulant, restorative.

The Spirits of the Pharmacopœias are as follow:—

	Sp. gr.	Percentage of Absolute Alcohol.
British . . . Lond. and Edin.	·838	Spiritus Rectificatus . . . 84
Dub.	·818	Spiritus Fortior and ·840 Spiritus Rectificatus.
Lond. and Dub.	·920	Edin. ·912. Spiritus Tenuior.
British	·920	5 Spirit, 3 Water „ Tenuior.
Austrian	·833	Sp. Vini Rectificatissimus . 90
„	·863	„ Rectificatus . . . 80
„	·913	„ Rectificatus dilutus 60
Belgian	·813	Alcohol at 33° contains . . 96
„	·837	„ 28° „ . . 89
„	·878	„ 20° „ . . 75
French	·835	„ 90° „ . . 90
„	·864	„ 80° „ . . 80
„	·914	„ 60° „ . . 60
Prussian	·833	Sp. Vini Rectificatissimus . 90
„	·894	„ Rectificatus. . } 70 5 Spirit (sp. g. ·833) by weight, and 2 Water }
U.S.	·817	Alcohol Fortius.
„	·835	Alcohol.
„	·941	3 Spirit, 3 Water. Alcohol Dilutum . .
„		Sp. Vini Gallici . . 48 to 56

Not Officinal.

STAPHISAGRIA.

The Oil of the seeds, 1 to 7 of Lard, has been successfully used by Mr. Balmanno Squire in Prurigo Senilis.

STRAMONII FOLIA ET SEMINA.

STRAMONIUM LEAVES AND SEEDS.

The *Datura Stramonium* cultivated in Britain. The leaves collected when the plants are in flower, dried; and the ripe seeds.

Medicinal Properties.

Influences especially the respiratory organs. Much used in asthma; the leaf chiefly by smoking in the shape of cigarettes. The extract and the tincture made of the seeds are used in convulsive coughs and antispasmodics, and as anodynes in gastrodynia and other painful affections. The extract given with success for hay asthma. Like Belladonna, it causes dilatation of the pupil.

(In all the Pharmacopœias; Dub. seeds only.)

Dose.—Of the leaves powdered, 1 gr. and upwards.)

Preparations.

EXTRACTUM STRAMONII.

Pack Stramonium Seeds, coarsely powdered, in a percolator, and pass about their own weight of Washed Ether, slowly through them, remove the Ether and set aside; now pour over them Proof Spirit until the seeds are exhausted. Distil off the spirit, and evaporate the residue by a water-bath to a proper consistence for forming pills.

(Same as Brit. 1864; Lond. and Edin. (U.S. Belg. and Fr. from fresh leaves, also Alcoholic from dried leaves); not in others.)

Dose.—$\frac{1}{4}$ gr., gradually increasing.

TINCTURA.

Stramonium Seeds, bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, and pour on the remaining spirit. When it ceases to drop, press, filter, and add spirit to make 8. =(1 in 8).

(Brit. 1864; Dub. U.S. (Austr. seeds; Belg. Fr. from leaves) 1 in 5 by weight; Belg. also Ethereal; not in others.)

Dose.—10 to 20 minims.

Incompatibles.—The Mineral Acids, Caustic Alkalies, Metallic Salts.

Antidotes.—Same as for poisoning with Belladonna, page 48.

STRYCHNIA.

STRYCHNIA.

An alkaloid, $C_{42}H_{22}N_2O_4$; or $C_{21}H_{22}N_2O_2$, eq. 334; obtained from Nux Vomica.

In right square octahedrons or prisms, colourless and inodorous.

Solubility in water 1 in 5760 : insoluble in Alcohol and Ether.

Test.—Not coloured by Nitric or Sulphuric Acid—indicating absence of Brucia. Leaves no ash when burned with free access of air.

Dose.—$\frac{1}{30}$ to $\frac{1}{12}$ gr., gradually and slowly increasing.

Divide by trituration with Sugar of Milk before making into pills.

Medicinal Properties.

Similar to those of Nux Vomica ; its chief use however being in the treatment of paralysis, especially in cases of lead-poisoning.

(In all the Pharmacopœias ; Pr. has Nitrate only.)

Preparation.

LIQUOR.

Strychnia in crystals, 4 grs. ; dilute Hydrochloric Acid, 6 minims ; Rectified Spirit, 2 drms. ; Distilled Water, 6 drms. : mix the Hydrochloric Acid with 4 drachms of the Water, and dissolve the Strychnia in it by means of heat ; then add the spirit and the remainder of the water. = (1 in 120).

2 drachms contain 1 grain of Strychnia.

(Same as Brit. 1864 ; Belg. 1 in 200 ; not in others.)

Dose.—4 to 10 minims = $\frac{1}{30}$ or $\frac{1}{12}$ gr. of Strychnia.

ANTIDOTES.—Chloroform, Belladonna, Tinct. Aconiti. A case of recovery after taking 3 grains Strychnia. *Vide* 'Lancet,' July 13, 1867.

STYRAX PRÆPARATUS.

PREPARED STORAX.

A balsam prepared from the bark of the *Liquidambar orientale* in Asia Minor, purified by means of Rectified Spirit and straining.

(In all the Pharmacopœias except Dub. and Pr.)

Medicinal Properties.

Stimulant and expectorant. Similar in action to the Balsams of Peru and Tolu. Recommended also in gonorrhœa and leucorrhœa ; said to be equal to Copaiba, and less disagreeable.

Dose.—10 to 20 grs. twice a day, gradually increasing.

Contained in Tinctura Benzoini Comp.

SUCCI.

JUICES.

Juices expressed from fresh medicinal plants, and preserved by the addition of Spirit, were introduced by the Author in 1835 (Pharm. Journ. vol. i.). By thus preserving the juice of the plant, its properties are not impaired by the action of air during the time necessary to dry the leaf for Tincture, nor by the action of both air and heat during the time necessary to evaporate the juice to the consistence of an Extract.

They were found in practice superior to the Tinctures, and have been since employed, especially by medical men in private practice, to the present time.

Physicians will doubtless satisfy themselves of the value of these medicines now they have found a place in the British Pharmacopœia.

The following have been introduced into the British Pharmacopœia, the formulæ for which will be found under the names of the drugs from which they are prepared :—

Page 90.	SUCCUS CONII	Dose, ½ to 1 drm.
„ 222.	SUCCUS SCOPARII	„ 1 to 2 drms.
„ 246.	SUCCUS TARAXACI	„ 2 to 4 drms.

These consist of 3 parts of Juice and 1 of Rectified Spirit.

Juices which are not officinal are enumerated in the Index.

The Alcoolatures of the Fr. are made by digesting equal weights of fresh plant and Rectified Spirit together for 10 days; press and filter. Aconite, Belladonna, Conium (Ciguë), Digitalis, Henbane (Jusquiame), Lettuce, Stramonium Leaves, Flowers of Colchicum, and Bulb of Colchicum, are so prepared.

SULPHUR.

SULPHUR.

S; eq. 16.

Sulphur occurs native, and is found in masses or in the powdery form mixed with various impurities. It is abundant in volcanic countries, as in Sicily, Naples, and the Roman States. It exists largely in this country in combination with Iron and Lead. It readily sublimes, and when washed is called washed or sublimed Sulphur.

SULPHUR SUBLIMATUM.

SUBLIMED SULPHUR.

A slightly gritty powder of a fine greenish-yellow colour; without taste and without odour until heated.

Test.—Entirely volatilized by heat, does not redden litmus paper—indicating absence of sulphurous and sulphuric acids. Solution of Ammonia, agitated with it and filtered, does not on evaporation leave any residue.

Insoluble in water. Soluble in Oils and Turpentine with heat.

Medicinal Properties.

Laxative, diaphoretic, and resolvent; evidently passes off by the pores of the skin. It is chiefly employed in hæmorrhoidal affections, chronic rheumatism; externally for skin diseases, especially scabies. Sometimes used as a dentifrice.

(In all the Pharmacopœias; Fr. Soufre Lavé.)

Dose.—As a stimulant, from 10 grains upwards; as a laxative, in treacle or milk, 20 to 60 grs. or more.

Preparations.

CONFECTIO SULPHURIS.

Sublimed Sulphur, 4; Acid Tartrate of Potash, 1; Syrup of Orange Peel, 4: triturate. =(1 in 2¼).

(Brit. 1864; same strength as Dub.; not in others.)

Dose.—1 to 2 drms.

UNGUENTUM SULPHURIS.

Sublimed Sulphur, 1; Benzoated Lard, 4: mix. =(1 in 5).

(Same as Brit. 1864, Edin. Dub. and Belg.; Lond. and U.S. 1 in 3; Fr. Pommade 1½ in 5½, Cérat 1 in 6½, Austr. Ung. Sulphuratum, Sulphur and Sulphate of Zinc, of each 1, Lard 8—mix; not in others.)

Not Officinal.

CHELSEA PENSIONER.—Sulphur, 6; Mustard, 6; Powdered Guaiacum, 3; Rhubarb, 1½; Nitre, 1½: mix. Honey or treacle sufficient to make it into an Electuary.

Dose.—A teaspoonful every alternate evening for rheumatism.

SULPHUR PRÆCIPITATUM.

PRECIPITATED SULPHUR.

A greyish-yellow soft powder, free from grittiness, and with no smell of Sulphuretted Hydrogen.

Test.—Entirely volatilized by heat: under the microscope it is seen to consist of opaque globules without any admixture of crystalline matter; otherwise corresponds with Sublimed Sulphur.

Medicinal Properties.

Similar to those of Sulphur Sublimatum, only more active.

(In all the Pharmacopœias except Edin. and Dub.; Fr. Soufre Précipité.)

Dose.—20 to 60 grs.

Not Officinal.

Precipitated Sulphur, 2; Subcarb. Potash, 1; Lard, 8: mix.

Excellent for Scabies.

SULPHURIS IODIDUM.

IODIDE OF SULPHUR.

S_2I, or **SI**; eq. 159.

Iodine, 4; Sublimed Sulphur, 1: rub together in a dry mortar, transfer to a flask and liquefy by a gentle heat, allow it to cool and solidify.

The Iodine should be the dry sublimed Iodine, and the Sulphur should be dried before mixing it with the Iodine.

Solubility in Glycerine, 1 in 60. Insoluble in water.

Preparation.

UNGUENTUM.

Iodide of Sulphur, 1; Lard, 16: mix. An excellent remedy for acne punctata and other eruptions of the skin. =(1 in 17).

(Same as Lond.; Fr. Pommade, 1 in 20; not in others.)

SUMBUL RADIX.

SUMBUL ROOT.

Supposed to be the roots of the *Jalamanski*, or Musk Root. Imported from India.

In slices of two to four inches in diameter, possessing the odour of musk, which it long retains.

Medicinal Properties.

A nervous stimulant in low typhoid fevers, and in asthenic cases of dysentery, diarrhœa, and malignant cholera. Valuable in delirium tremens.

Preparation.

TINCTURA.

Sumbul, bruised fine, 1; Rectified Spirit, 8; digest seven days and filter.

Dose.—15 to 30 minims.

A new preparation.

SUPPOSITORIÆ.

		Each contains
Page 14.	SUPPOSITORIA ACIDI TANNICI.	3 grs. Tannic Acid.
131.	SUPPOSITORIA HYDRARGYRI.	5 grs. Mercurial Ointment.
167.	SUPPOSITORIA MORPHIÆ.	½ gr. Hydrochlorate of Morphia.
188.	SUPPOSITORIA PLUMBI COMPOSITA.	3 grs. Acetate of Lead 1 gr. Powdered Opium.

Suppositories, not officinal, are enumerated in the Index.

Not Officinal.

SYMPHYTUM.

COMMON COMFREY.

Syn. CONSOUDE, *Fr.*

The root is black without and white within. Flowers yellow, common in ditches near rivers.

Medicinal Properties.—Astringent, mucilaginous, glutinous; useful to form cases for injured limbs. The black rind is scraped off, and the mucilaginous root is then scraped carefully into a nice even pulp; this spread upon cambric or old muslin of the thickness of a crown-piece, is wrapped round the limb and bandaged over; it shortly stiffens, and forms a casing superior to starch, giving support and tonicity to the part. The Author knew a bone-setter who practised fifty years ago, and rendered himself famous for setting compound fractures with this root, which he kept secret, and he never removed the bandage after the first dressing until the limb was well.

SYRUPI.

SYRUPS.

Syrups are apt to ferment or mould when made with too little sugar, and to crystallize when too concentrated; to avoid these inconveniences which have arisen from former instructions for the preparation of this class of medicines, the British Pharmacopœia directs that the product of each syrup shall be made up to one constant weight, thereby ensuring uniformity of consistence, which is perhaps as good a practical guide as taking the specific gravity, when cooled to 60° F. The Dublin Pharmacopœia directed that in the case of simple syrup the specific gravity should be given, namely, 1·330, and this gravity is a very proper one for ordinary temperatures, but it must be understood that if the syrup be exposed to a very low temperature, say 40° F., it may crystallize. It keeps perfectly well, however, at a range of temperature from 50° upwards. Of course the more refined the sugar, the cleaner and lighter in colour will be the syrup, but even with the best sugar a little scum will form on the surface, which must be removed; when straining is required, it must be done whilst the syrup is hot, and through flannel, returning the first runnings, if not quite bright, into the bag. Syrups keep best in full bottles; when a bottle has remained half empty a short time, although of the right density at first, it is very apt to crystallize; and when kept in large jars, say of from 8 to 10 gallons, with loose covers, the sides are generally studded with crystals, and the syrup is thus frequently rendered too weak to keep when sent out. To prevent fermentation, for instance, in the Syrup of Poppies, several additions have been proposed to be made, but they have not succeeded because, in our former processes for preparing the syrup, the matter which is the cause of the fermentation was not removed; in the new process Rectified Spirit is employed for that purpose, and the result is that Syrup of Poppies, which in the summer frequently fermented so much that it rushed out of the bottles, now remains unaltered. It is, however, necessary that no more spirit be added than is ordered, for a larger quantity is very apt to cause deposition of crystals.

In making simple syrup from any sugar requiring white of egg to render it perfectly bright, the egg should be beaten into a froth, and not added till the syrup has become hot enough to coagulate it; it should then be poured quickly in, and well stirred up with the syrup; the air enclosed in the froth causes the coagulated albumen to rise to the surface, so that it may be effectually removed by skimming, whereas, if it is mixed with the syrup before it is heated, the air escapes as it warms up, and a good part of the albumen does not rise; still, by straining the syrup, it may be made bright.

Syrup of Lemon Juice, if kept long, deposits grape sugar, and should therefore be made in smaller quantity, and more frequently than the other syrups. The Syrups of Orange and Ginger are now made from their tinctures, which give just as good a flavour, and produce much brighter syrups, besides the advantage of avoiding the starch and other matters which were contained in the former syrups. The Syrup of Rose is now made with the red roses. The Syrup of Senna, which was previously the exception of the syrups, being prepared with treacle, is now made with refined sugar like the rest, and being treated like the Poppies, no longer ferments; it is very

palatable and sufficiently active. The Syrup of Tolu is made by the London process. Syrup of Violets and others of little medicinal value have not been admitted into the British Pharmacopœia.

A good and expeditious method of making Syrup of Iodide of Iron is introduced; still the Iodide is not entirely protected by the sugar from change. The only way in which this can be effectually done is by a solution in water having a coil of iron-wire reaching throughout the whole length of the column, as originally proposed by the Author.

The syrups of former Pharmacopœias omitted from the British are the following:—Syrupus Aceti, Edin.; Acidi Citrici, Dub.; Althææ, Lond. Edin.; Cocci, Lond.; Croci, Lond. Edin. Dub.; Ipecacuanhæ, Edin.; Morphiæ Acetatis, Dub.; Morphiæ Muriatis, Dub.; Rosæ (Centifoliæ), Lond. Edin.; Sarsæ, Lond. Edin.; Violæ, Lond. Edin.

The new introductions are:—Syrupus Aurantii Floris; Ferri Phosphatis.

The following are the syrups of the British Pharmacopœia, the formulæ for which will be found under the names of the drugs from which they are prepared:—

Page.	Dose.		
214.		SYRUPUS.—*See* SACCHARUM	Sugar 1 in 1½.
45.	1 drm.	SYRUPUS AURANTII	Tinct. 1 in 8.
44.	1 drm.	SYRUPUS AURANTII FLORIS	1 in 6¾.
112.	½ drm.	SYRUPUS FERRI IODIDI, 4⅓ grains in each drachm.	
117.	1 drm.	SYRUPUS FERRI PHOSPHATIS, 1 grain in each drachm.	
129.	1 drm.	SYRUPUS HEMIDESMI	1 in 8.
150.	1 drm.	SYRUPUS LIMONIS	Juice 1 in 2.
166.	1 drm.	SYRUPUS MORI	Juice 1 in 2.
180.	1 drm.	SYRUPUS PAPAVERIS	Capsules 1 in 2¼.
207.	1 drm.	SYRUPUS RHAMNI.	
209.	1 drm.	SYRUPUS RHEI	Root 1 in 14.
210.	1 drm.	SYRUPUS RHŒADOS	Petals 1 in 3½.
212.	1 drm.	SYRUPUS ROSÆ GALLICÆ	Petals 1 in 17½.
221.	½ drm.	SYRUPUS SCILLÆ	1 in 17.
224.	1 drm.	SYRUPUS SENNÆ	1 in 2.
47.	1 drm.	SYRUPUS TOLUTANUS.—*See* BALS. TOLU.	
262.	1 drm.	SYRUPUS ZINGIBERIS	Strong Tinct. 1 in 26⅔.

TABACI FOLIA.

LEAF TOBACCO.

The dried leaves of the Virginian Tobacco, *Nicotiana Tabacum*, cultivated in America.

In large, mottled brown, ovate or lanceolate, acuminate leaves, bearing numerous short glandular hairs, having a peculiar heavy odour and nauseous-bitter acrid taste.

Test.—Not manufactured.

From the leaf of the plant are derived :—

NICOTIN, a nearly colourless fluid, sp. g. 1·048, of an acrid, burning taste, inflammable, miscible with water, ether, alcohol, and the fixed oils; capable of being formed into crystalline salts; its formula is $N_2C_{20}H_{14}$, eq. 162. To this alkaloid Tobacco owes its activity. Nicotin is a powerful poison.

NICOTIANIN, a fatty substance, having the smell of tobacco smoke, with an aromatic and somewhat bitter taste.

Medicinal Properties.

A powerful sedative, especially affecting the heart, frequently causing great depression. Narcotic and emetic. Smoked, it is sedative and expectorant in various cases of asthma. Occasionally used as snuff for affections of the head. It is dangerous on account of its poisonous properties, but useful as an antidote to the poison of Strychnia (see Nux Vomica).

(Brit. 1864, Lond. Edin. Dub. U. S. Pr. and Fr. Tabac; not in others.)

Preparation.

ENEMA.

Leaf Tobacco, 20 grs.; boiling Water, 8 oz.: infuse half an hour, and strain.

For one enema.

(Same as Brit. 1864, Lond. Edin. Dub.; not in others.)

Used in strangulated hernia, obstinate constipation, and retention of urine.

ANTIDOTES.—In case Tobacco has been swallowed, an emetic; in any case stimulants internal and external. Professor Haughton, of Dublin, relies on Strychnia as an antidote for Tobacco, and on Tobacco for Strychnia.

TAMARINDUS.

TAMARIND.

The preserved pulp of the fruit of the *Tamarindus Indica*, imported from the West Indies.

Test.—A piece of bright iron left in contact with the pulp for an hour does not exhibit any deposit of copper—the Tamarind acid would take up Copper if such vessels have been used.

Medicinal Properties.

Refrigerant and slightly laxative. Infused with water, forms a cooling drink in febrile affections.

(In all the Pharmacopœias, except Austr. Pr.)

Dose.—½ oz. and upwards.

Contained in Confectio Sennæ.

TARAXACI RADIX.

DANDELION ROOT.

The fresh roots of the *Taraxacum Dens-Leonis*, gathered between September and February from meadows and pastures in Britain.

Much difference of opinion exists as to the proper time of taking up the root. Some think that the winter, when it yields the thick albuminous juice, is the best; others prefer the thin and bitter juice yielded by the root in the early summer. The Author inclines to the former opinion, and has so expressed himself in an article furnished to Mr. Brande, and inserted by him in his 'Materia Medica.' Observations made throughout the year are there given. Juice taken from roots dug up in November, before any frost appeared, had a specific gravity 1·080; 28 pounds of root yielded 7 pounds of juice, from which, when heated to 212° F., besides 4 ounces of insoluble matter, it left on evaporation 28 ounces of extract. This is not a correct average, for when in the highest perfection—

100 of root yield 30 of juice = 8 of extract. 100 of root, when dried, weigh 25.

Medicinal Properties.

A mild laxative, acting specially on the liver. In dropsy, arising from obstruction of the liver, it is given in combination with purgatives.

(In all the Pharmacopœias; Fr. Pissenlit.)

Preparations.

DECOCTUM.

Dried Dandelion Root, sliced and bruised, 1; Distilled Water, 30: boil ten minutes and strain. The produce should measure 20. =(1 in 20).

(Same as Brit. 1864, Lond. fresh root; Edin. and Belg. have provided for the varying condition of the root at different seasons by ordering the whole plant in a fresh state to be used; not in others.)

Dose.—2 to 4 oz.

EXTRACTUM.

Crush fresh Dandelion Root, press out the juice, and allow it to deposit; heat the clear liquor to 212° F., and maintain the temperature for ten minutes; then strain and evaporate by a water-bath at a temperature not exceeding 160° to a proper consistence.

100 pounds of fresh root yield 30 pounds of juice = 8 pounds of extract.

Dose.—5 to 15 grs.

(Brit. 1864, Lond. Edin. U. S. from fresh root; Fr. Juice of leaves; Austr. Belg. and Pr. whole plant; not in others.)

The Lond. and Edin. processes were far inferior to the present; the product was much injured by the tedious evaporation.

SUCCUS.

Bruise Dandelion Root in a stone mortar, press out the juice, and to every 3 measures of juice add 1 of Rectified Spirit: set aside seven days and filter.

Dose.—2 to 4 drms.

(Brit. 1864 and Belg. only, but in the latter the juice is merely coagulated and strained; no spirit is used.)

TEREBINTHINA CANADENSIS.

CANADA BALSAM.

The Turpentine obtained from the stem of the *Abies balsamea* by incision, in Canada.

(Brit. 1864, Edin. U. S.; not in others.)

Contained in Charta Epispastica, Collodion Flexile.

TEREBINTHINÆ OLEUM.

OIL OF TURPENTINE.

The oil distilled from the Turpentine which exudes from the *Pinus palustris* or *P. Pinaster*, and *P. Tæda*, imported from America and France.

Medicinal Properties.

Stimulant, diuretic, occasionally diaphoretic, anthelmintic; in large doses purgative, sometimes causing nausea, vomiting, and intoxication. It especially affects the kidneys, and the mucous membrane of the genito-urinary organs. Antispasmodic in hysterical affections. Externally rubefacient; employed as a liniment in chronic inflammation. Flies and gnats are kept away by the odour of Turpentine.

(In all the Pharmacopœias.)

Dose.—10 to 30 minims; as an anthelmintic, 2 to 4 drms. May be given in Mistura Amygdalæ.

1 drm. of Mucilage, with diligent trituration, renders ½ drm. of Oil of Turpentine emulsive, with 1 oz. of Distilled Water.

30 grs. Powder of Acacia rubbed first with 1 drm. of Oil of Turpentine, then with a drm. of Water, and lastly triturating whilst adding gradually 1 oz. Distilled Water makes a good emulsion.

Preparations.

CONFECTIO TEREBINTHINÆ.

Oil of Turpentine, 1; Liquorice Powder, 1; Clarified Honey, 2: mix. =(1 in 4).

Rub the two first together, and add the Honey; but if the Turpentine separates pour it off, and re-add it gradually with constant trituration, and it will unite.

(Same as Brit. 1864 and Dub.; not in others.)

Dose.—1 to 4 drms. daily; for Tænia, 2 to 4 oz.

It is much used in Dublin as a diffusible stimulant in chronic bronchitis, and is the most palatable of all the turpentine preparations.

ENEMA TEREBINTHINÆ.

Oil of Turpentine, 1 oz.; Mucilage of Starch, 15 oz.: mix for 1 enema.

(Brit. 1864, same strength as Dub.; Lond. and Edin.; not in others.)

LINIMENTUM TEREBINTHINÆ.

Oil of Turpentine, 16; Camphor, 1; Soft Soap, 2: dissolve the Camphor in the Turpentine, then add the Soap; rub till thoroughly mixed. =(1 in 1⅕).

(Differs widely from Brit. 1864 and Dub. 1 in 2½; Edin. 1 in 2; Lond. 1 in 1¼, nearly; U. S. 1 in 2½; Belg. 9½ in 10; not in others.)

LINIMENTUM TEREBINTHINÆ ACETICUM.

Oil of Turpentine, 1; Acetic Acid, 1; Liniment of Camphor, 1: mix. =(1 in 3).

(Brit. 1864.)

St. John Long's celebrated Liniment.

UNGUENTUM TEREBINTHINÆ.

Oil of Turpentine, 1; Resin, in powder, $\frac{1}{8}$; Yellow Wax, $\frac{1}{2}$; Prepared Lard, $\frac{1}{2}$: mix with heat. =(1 in $2\frac{1}{8}$).

(Same as Brit. 1864; Austr. differs from this in composition; not in others.)

THEOBROMÆ OLEUM.

Syn. CACAO BUTTER.

A concrete oil, obtained by expression and heat from the ground seeds of *Theobroma Cacoa.*

Occurs in cakes of a yellowish colour of a pleasant cacao odour. Does not become rancid from exposure to air.

Contained in all the suppositories.

Not Officinal.

The following, form good bases for suppositories:—

Theobroma Oil, when melted, begins to solidify at				72° F.
Stearine of Cocoanut Oil	„	„	„	75° F.
4 of Stearine and 2 Mutton Fat	„	„	„	77° F.
4 of Stearine and 1 Spermaceti	„	„	„	80° F.

THERIACA.

TREACLE.

Syn. SACCHARI FÆX, *Lond.*

The uncrystallized residue of the refining of Sugar. Golden Syrup of commerce.

Sp. g. 1·40.

Test.—Nearly free from empyreumatic odour or flavour.

Medicinal Properties.

Demulcent, nutrient, and slightly laxative. A favourite condiment in pharmacy, chiefly employed to make pills, for which, on account of its retentiveness of moisture, it is well adapted.

(Brit. 1864, Lond. Edin. and Dub.; not in others.)

Contained in Pil. Assafœt. Comp., Pil. Rhei Comp., Pil. Scillæ Comp.

THUS AMERICANUM.

COMMON FRANKINCENSE.

The concrete Turpentine of the Frankincense Pine, *Pinus Tæda*, and the Swamp Pine, *P. palustris*, from the Southern States of North America.

A softish bright yellow opaque solid, resinous but tough, having the odour of American turpentine.

The true Thus is *Pix Burgundica* from the Spruce Fir, *Abies excelsa*. Vide *Pix Burgundica*, page 185.

(Brit. 1864; Lond. Dub. and Fr. only.)

Medicinal Properties.

Used externally as a stimulant.

Contained in Emplastrum Picis.

TINCTURÆ.

TINCTURES.

Many of these have been directed by the British Pharmacopœia to be made by percolation, and as this operation imposes several conditions to be complied with in order that it may be efficiently performed, directions on the subject will be found in the Appendix, Page 277.

Some changes have been made in the strength of the Tinctures; for example, Tinct. Aconiti and Tinct. Belladonnæ have been reduced whilst others have been strengthened, as Tinct. Calumbæ, Cardamomi, Myrrhæ, Rhei, Sennæ, Serpentariæ, Tolutana, and Zingiberis.

Stronger preparations of Aconite and Belladonna will be found classed with the Liniments.

The Tinctures of former Pharmacopœias omitted from the British are the following:—Tinctura Aloes Composita, Lond.; Aloes et Myrrhæ, Edin.; Ammoniæ Composita, Lond.; Camphoræ, Lond. Edin. Dub. (*see* Sp. Camphoræ); Cardamomi, Edin.; Cassiæ, Edin.; Castorei Ammoniata, Edin.; Cinchonæ Pallidæ, Lond. Edin. Dub.; Cinnamomi Composita, Lond. Edin. Dub.; Colchici Composita, Lond.; Conii, Lond. Edin.; Cuspariæ, Edin.; Ergotæ Ætherea, Lond.; Ferri Ammonio-Chloridi, Lond.; Guaiaci, Edin. Dub.; Hellebori, Lond.; Iodinii (Simplex), Edin.; Lactucarii, Edin.; Lupulinæ, Dub.; Matico, Dub.; Quassiæ Composita, Edin.; Rhei et Aloes, Edin.; Rhei et Gentianæ, Edin.

The following names have been changed:—Tinctura Catechu Composita, Lond. Edin. Dub., now Tinct. Catechu; Tinctura Iodinii Composita, Lond. Edin. Dub., now Tinctura Iodi; Tinct. Opii Camphorata, Edin. Dub., now Tinctura Camphoræ Composita; Tinct. Rhei Composita, Lond. Dub., now Tinctura Rhei.

The new Tinctures introduced are:—Tinctura Arnicæ, Chloroformi Composita, Conii (Fructus), Nucis Vomicæ, Pyrethri, Sabinæ, Senegæ, Sumbul, Veratri Viridis, Zingiberis Fortior.

The following are the Tinctures of the British Pharmacopœia, the formulæ for which will be found under the names of the drugs from which they are prepared; all are made with Proof Spirit unless otherwise stated.

Dose.		Proportion of active ingredients in the mass.	
10 min.	TINCTURA ACONITI	1 in 8	Rect. Sp.
1 drm.	TINCTURA ALOES	1 in 40.	
1 drm.	TINCTURA ARNICÆ	1 in 20	Rect. Sp.
½ drm.	TINCTURA ASSAFŒTIDÆ	1 in 8	Rect. Sp.
1 drm.	TINCTURA AURANTII	1 in 10.	
5 min.	TINCTURA BELLADONNÆ	1 in 20.	
½ drm.	TINCTURA BENZOINÆ COMP.	1 in 10	Rect. Sp.
1 drm.	TINCTURA BUCHU	1 in 8.	
½ drm.	TINCTURA CALUMBA	1 in 8.	
15 min.	TINCTURA CAMPHORÆ COMPOSITA. Opium 1, Benzoic Acid 1, Camphor ¾, in 240.		
5 min.	TINCTURA CANNABIS INDICÆ (Extract)	1 in 20	Rect. Sp.
5 min.	TINCTURA CANTHARIDIS	1 in 80.	
10 min.	TINCTURA CAPSICI	1 in 27	Rect. Sp.
½ drm.	TINCTURA CARDAMOMI COMP.	1 in 80.	
½ drm.	TINCTURA CASCARILLÆ	1 in 8.	
½ drm.	TINCTURA CASTOREI	1 in 20	Rect. Sp.
1 drm.	TINCTURA CATECHU	1 in 8.	
15 min.	TINCTURA CHIRATÆ	1 in 8.	
20 min.	TINCTURA CHLOROFORMI COMP.	1 in 10	Rect. Sp.
½ drm.	TINCTURA CINCHONÆ COMP.	1 in 10.	
1 drm.	TINCTURA CINCHONÆ FLAVÆ	1 in 5.	
½ drm.	TINCTURA CINNAMOMI	1 in 8.	
30 min.	TINCTURA COCCI	1 in 8.	
15 min.	TINCTURA COLCHICI SEMINUM	1 in 8.	
½ drm.	TINCTURA CONII (FRUCTUS)	1 in 8.	
½ drm.	TINCTURA CROCI	1 in 20.	
½ drm.	TINCTURA CUBEBÆ	1 in 8.	
10 min.	TINCTURA DIGITALIS	1 in 8.	
15 min.	TINCTURA ERGOTÆ	1 in 4.	
5 min.	TINCTURA FERRI ACETATIS		Rect. Sp.
10 min.	TINCT. FERRI PERCHLORIDI (Liquor)	1 in 4	Rect. Sp.
½ drm.	TINCTURA GALLÆ	1 in 8.	
1 drm.	TINCTURA GENTIANÆ COMP.	1 in 13½.	
½ drm.	TINCTURA GUAIACI AMMONIATA	1 in 5	Arom. Sp. Ammon.
15 min.	TINCTURA HYOSCYAMI	1 in 8.	
5 min.	TINCTURA IODI Iodine 1, Iodide Potass. ½	in 40	Rect. Sp.
½ drm.	TINCTURA JALAPÆ	1 in 8.	
½ drm.	TINCTURA KINO	1 in 10	Rect. Sp.
1 drm.	TINCTURA KRAMERIÆ	1 in 8.	
½ drm.	TINCTURA LAVANDULÆ COMP. (Oil)	1 in 213	Rect. Sp.
½ drm.	TINCTURA LIMONIS	1 in 8.	
10 min.	TINCTURA LOBELIÆ	1 in 8.	

Dose.		Proportion of active ingredients in the mass.	
10 min.	TINCTURA LOBELIÆ ÆTHEREA	1 in 8	Sp. Ether.
½ drm.	TINCTURA LUPULI	1 in 8.	
½ drm.	TINCTURA MYRRHÆ	1 in 8	Rect. Sp.
10 min.	TINCTURA NUCIS VOMICÆ	1 in 10	Rect. Sp.
10 min.	TINCTURA OPII	1 in 13⅓.	
½ drm.	TINCTURA OPII AMMONIATA	1 in 96	Rect. Sp.
	TINCTURA PYRETHRI	1 in 5	Rect. Sp.
1 drm.	TINCTURA QUASSIÆ	1 in 27.	
1 drm.	TINCTURA QUINIÆ	1 in 60	Tr. Orange.
1 drm.	TINCTURA RHEI	1 in 10.	
15 min.	TINCTURA SABINÆ	1 in 8.	
15 min.	TINCTURA SCILLÆ	1 in 8.	
½ drm.	TINCTURA SENEGÆ	1 in 8.	
2 drms.	TINCTURA SENNÆ	1 in 8.	
½ drm.	TINCTURA SERPENTARIÆ	1 in 8.	
10 min.	TINCTURA STRAMONII	1 in 8.	
10 min.	TINCTURA SUMBUL	1 in 8.	
15 min.	TINCTURA TOLUTANA.—*See* BALSAM	1 in 8	Rect. Sp.
1 drm.	TINCTURA VALERIANÆ	1 in 8.	
½ drm.	TINCTURA VALERIANÆ AMMONIATA	1 in 8	Arom. Sp. / Ammon.
5 min.	TINCTURA VERATRI VIRIDIS	1 in 5	Rect. Sp.
15 min.	TINCTURA ZINGIBERIS	1 in 8	Rect. Sp.
5 min.	TINCTURA ZINGIBERIS FORTIOR	1 in 2	Rect. Sp.

Tinctures that are not officinal are enumerated in the Index.

TRAGACANTHA.

TRAGACANTH.

A gummy exudation from the stem of the *Astragalus verus*, collected in Asia Minor.

Sparingly soluble in cold water.

Test.—After maceration in cold water, the fluid portion is not precipitated by the addition of Rectified Spirit—indicating absence of Acacia Gum; and the gelatinous mass, when boiled and cooled, is not turned deep blue by Tincture of Iodine—indicating absence of Starch.

Medicinal Properties.

Demulcent. Used for the suspension of heavy insoluble powders in liquids; for this purpose a quantity equal to that of the powder may be used.

(In all the Pharmacopœias.)

Dose.—Of the powder, 20 grs. upwards.

Preparations.

MUCILAGO.

Tragacanth in powder, 60 grs.; Distilled Water, 10 oz. To the water contained in a pint bottle add the Tragacanth, agitate briskly for a few minutes, and again at short intervals, until the Tragacanth is perfectly diffused, and finally has formed a mucilage. =(1 in 80).

(Brit. 1864, 1 in 48; Edin. 1 in 36; Austr. and Belg. 1 in 84; Austr. M. Spissa 1 in 120; Fr. Mucilage de Gomme Adragante 1 in 8; U. S. 1 in 16; not in others.)

Dose.—1 oz. upwards.

One part of Tragacanth gives more viscosity to water than 25 parts of Gum Arabic.

PULVIS COMPOSITUS.

Tragacanth in powder, 1; Gum Arabic in powder, 1; Starch in powder 1; Refined Sugar in powder, 3: rub well together. =(1 in 6).

(Same as Brit. 1864; Lond. and Edin. 1 in 5; not in others.)

Dose.—10 to 60 grs.

Not Officinal.

TRITICUM REPENS.

CREEPING COUCH GRASS.

DECOCTUM.

Root, 1 oz.; Water, 20 oz.: boil ten minutes, and strain when cold.

Dose.—4 oz. to 8 oz. three times a day for mucous discharge from the bladder.

(Fr. Chien-dent.)

TROCHISCI.

LOZENGES.

Lozenges are especially Edinburgh preparations, the London and Dublin Pharmacopœias not containing any of them.

The following Trochisci are omitted from the British Pharmacopœia:—Trochisci Acaciæ, Acidi Tartarici, Cretæ, Glycyrrhizæ, Lactucarii, Magnesiæ.

The following are newly introduced: Trochisci Acidi Tannici, Bismuthi, Catechu.

The following are the Trochisci of the British Pharmacopœia:—

		Quantity of the active ingredient contained in each lozenge.
Page 14.	TROCHISCI ACIDI TANNICI	$\frac{1}{2}$ grain.
52.	TROCHISCI BISMUTHI	2 grains.
73.	TROCHISCI CATECHU	$1\frac{1}{4}$ grain.
119.	TROCHISCI FERRI REDACTI	1 grain.
143.	TROCHISCI IPECACUANHÆ	$\frac{1}{4}$ grain.
167.	TROCHISCI MORPHIÆ . (Hydrochlorate)	$\frac{1}{36}$ grain.
167.	TROCHISCI MORPHIÆ ET IPECAC. „	$\frac{1}{36}$ and $\frac{1}{12}$ gr. Ipecac.
178.	TROCHISCI OPII . . . . . (Extract)	$\frac{1}{10}$ grain.
198.	TROCHISCI POTASSÆ CHLORATIS . .	5 grains.
230.	TROCHISCI SODÆ BICARBONATIS . .	5 grains.

Lozenges that are not Officinal are enumerated in the Index.

ULMI CORTEX.

ELM BARK.

The dried inner bark of the *Ulmus campestris*, deprived of its outer layer; from trees indigenous to and cultivated in Britain.

Medicinal Properties.

Bitter demulcent, slightly tonic, astringent, and diuretic. Used in herpetic eruptions.

(Brit. 1864; Lond. and U.S.; Fr. Orme Champêtre; not in others.)

Preparation.

DECOCTUM.

Elm Bark, cut in small pieces, 1; Distilled Water, 16: boil down to 8 and strain. =(1 in 8).

(Lond. only.)

Dose.—2 to 4 oz. three or four times daily.

INCOMPATIBLES.—Sulphate of Iron, Acetate of Lead, Nitrate of Silver, and Gelatine.

UNGUENTA.

OINTMENTS.

All the Cerates are now merged into this group. Every one must have felt the inconvenience of referring from one part of the Pharmacopœia to another for Cerates and Ointments, and there appeared no reason why they should not all be designated Ointments, and classed together.

The Cerates of former Pharmacopœias omitted from the British Pharmacopœia are:—Ceratum, Lond.; Ceratum Calaminæ, Lond. and Edin.; Cantharidis, Lond.; Cetacei, Lond.; Hydrargyri Comp. Lond.; Plumbi Acetatis, Lond.; Plumbi Comp. Lond., now Ung. Plumbi Subacetatis Compositum, and made with White Wax; Resinæ, Lond.; Saponis Comp. Lond.; now Emplastrum C. S. Compositum; Simplex, Edin.

The Ointments omitted are:—Unguentum Æruginis, Edin.; Cupri Subacetatis, Edin.; Infusi Cantharidis, Edin.; Ceræ Albæ, Dub.; Conii, Lond.; Hydrargyri Iodidi, Lond.; Hydrargyri Nitratis Mitius, Lond.; Opii, Lond.; Picis, Lond.; Plumbi Comp., Lond.; Sambuci, Lond.; Sulphuris Comp., Lond.

The following are new preparations:—Unguentum Aconitiæ, Atropiæ, Cadmii Iodidi, Calomelanos, Gallæ, Terebinthinæ, Veratriæ.

The following are the Ointments of the British Pharmacopœia, the formulæ for which will be found under the names of the drugs from which they are prepared:—

		Proportion of active ingredients in the mass.
Page 17.	UNGUENTUM ACONITIÆ	1 in 60.
36.	UNGUENTUM ANTIMONII TARTARATI	1 in 5.
44.	UNGUENTUM ATROPIÆ	1 in 60.
49.	UNGUENTUM BELLADONNÆ (Extract)	1 in 6½.
55.	UNGUENTUM CADMII IODIDI	1 in 8.

		Proportion of active ingredients in the mass.
66.	UNGUENTUM CANTHARIDIS	1 in 8.
76.	UNGUENTUM CETACEI	1 in 5.
92.	UNGUENTUM CREASOTI	1 in 9.
101.	UNGUENTUM ELEMI	1 in 5.
123.	UNGUENTUM GALLÆ	1 in 6½.
123.	UNGUENTUM GALLÆ CUM OPIO	(Opium) 1 in 15.
131.	UNGUENTUM HYDRARGYRI	(Mercury) 1 in 2.
137.	UNGUENTUM HYDRARGYRI AMMONIATI	1 in 8.
132.	UNGUENTUM HYDRARGYRI COMPOSITUM	1 Mercury in 4½.
133.	UNGUENTUM HYDRARGYRI IODIDI RUBRI	1 in 28.
134.	UNGUENTUM HYDRARGYRI NITRATIS	(Mercury) 1 in 15½.
135.	UNGUENTUM HYDRARGYRI OXIDI RUBRI	1 in 8.
137.	UNGUENTUM HYDRARGYRI SUBCHLORIDI	1 in 6½.
142.	UNGUENTUM IODI	(Iodine) 1 in 31.
186.	UNGUENTUM PICIS LIQUIDÆ	5 in 7.
188.	UNGUENTUM PLUMBI ACETATIS	1 in 37½.
188.	UNGUENTUM PLUMBI CARBONATIS	1 in 8.
189.	UNGUENTUM PLUMBI IODIDI	1 in 8.
190.	UNGUENTUM PLUMBI SUBACETATIS COMPOSITUM (Solution of Subacetate of Lead)	1 in 5½.
195.	UNGUENTUM POTASSÆ SULPHURATÆ	1 in 15½.
193.	UNGUENTUM POTASSII IODIDI	nearly 1 in 8¾.
207.	UNGUENTUM RESINÆ	1 in 3½.
214.	UNGUENTUM SABINÆ	nearly 1 in 3⅜.
74.	UNGUENTUM SIMPLEX.	
241.	UNGUENTUM SULPHURIS	1 in 5.
242.	UNGUENTUM SULPHURIS IODIDI	1 in 17.
248.	UNGUENTUM TEREBINTHINÆ	(Oil) 1 in 2⅛.
256.	UNGUENTUM VERATRIÆ	1 in 60.
260.	UNGUENTUM ZINCI	1 in 6½.

Ointments which are not officinal are enumerated in the Index.

UVÆ URSI FOLIA.

BEARBERRY LEAVES.

The dried leaves of the *Arctostaphylos Uva Ursi*, from indigenous plants.

Test.—Leaves not dotted beneath, nor toothed on the margin.

(Brit. 1864; Lond. Edin. Dub. U.S. Belg.; Fr. Busserole; not in others.)

Medicinal Properties.

Astringent and tonic, with a direct influence on the kidneys and urinary organs. Used in menorrhagia and diabetes, also in chronic dysentery.

Dose.—Of the powdered leaf, 10 to 30 grs.

INCOMPATIBLES.—Iron Salts, Lead Salts, Nitrate of Silver, Vegetable Alkaloids, Gelatine.

Preparation.

INFUSUM.

Bearberry Leaves, 1; boiling Distilled Water, 20: infuse two hours, and strain. (1 in 20).

(Brit. 1864; not in others; Lond. Edin. and Dub. U. S., Decoctum.)

Dose.—1 to 2 oz.

UVÆ.

RAISINS.

The ripe fruit of the Grape Vine, *Vitis vinifera*, dried in the sun or with artificial heat. Imported from Spain.

Medicinal Properties.

Nutritious and demulcent. Principally used as a flavouring agent.

(In all the Pharmacopœias, except Austr. and Pr.)

Contained in Tinct. Cardam. Comp., Tinct. Sennæ.

VALERIANÆ RADIX.

VALERIAN ROOT.

The root of the *Valeriana officinalis*, indigenous and cultivated in Britain, collected in autumn and dried; that from wild plants growing on dry soil preferred.

Medicinal Properties.

It is a nervous stimulant and antispasmodic. Useful in hysteria and nervous diseases; also in chorea and epilepsy; and as an adjunct to tonics.

(In all the Pharmacopœias.)

Dose.—10 to 30 grs. of the powder.

Preparations.

INFUSUM.

Valerian, bruised, 120 grs.; boiling Distilled Water, 10 oz.: infuse one hour, and strain. =(1 in 40).

(Same as Brit. 1864, Lond.; Dub. 1 in 36; U. S. 1 in 30; Fr. 1 in 100, Tisane; not in others.)

Dose.—1 to 2 oz.

TINCTURA.

Valerian, bruised, 1; Proof Spirit, 8: macerate the Valerian forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, pour on the remainder of the spirit; when it ceases to drop, press and filter, washing the marc with spirit to make up 8. =(1 in 8).

(Same as Brit. 1864. Lond. Edin. Dub.; U. S. 1 in 7; (Austr. Belg. Fr. and Pr. 1 in 5 by weight.)

Dose.—1 to 2 drms.

TINCTURA AMMONIATA.

Valerian, bruised, 1; Aromatic Spirit of Ammonia, 8: macerate the Valerian seven days, press, filter, and add spirit to make up 8. =(1 in 8).

(Same as Brit. 1864; Lond. and Edin. Tinct. Valerianæ Comp.; (Belg. with liquid Ammonia and Alcohol, 1 and 5½ by weight;) U. S. 1 in 7; not in others.)

Dose.—½ to 1 drm.

VERATRIA.

VERATRIA.

An alkaloid, $C_{64}H_{52}N_2O_{16}$, obtained from Cevadilla, not quite pure; eq. 592.

Pale grey, amorphous, pulverulent masses, powerfully irritating the nostrils, strongly and persistently bitter, and highly acrid and poisonous. Concentrated Sulphuric Acid changes it first to yellow, then blood-red, and lastly violet.

Solubility: scarcely soluble in cold water; in boiling water, 1 in 1000; in Rectified Spirit, 1 in 11; in Ether, 1 in 6; and readily in diluted acids.

Medicinal Properties.

A powerful emetic and drastic purgative. Rarely given internally. Used externally in neuralgia, in chronic swellings, stiffening or induration of the joints. It should be cautiously used where the skin is broken.

(In all the Pharmacopœias except Dub.; Austr. Veratrinum; Pr. Veratrium.)

Preparation.

UNGUENTUM.

Veratria, 8 grs.; Prepared Lard, 1 oz.; Olive Oil, ½ drm.: rub the Veratria and the Oil together, then mix thoroughly with the Lard. =(1 in 60).

(Same as Brit. 1864; U. S. 20 grs. to 1 oz., or 1 in 25; Belg. 1 in 100; not in others.)

VERATRI VIRIDIS RADIX.

GREEN HELLEBORE ROOT.

The dried rhizome of *Veratrum viride*, from U. S. and Canada.

Medicinal Properties.

Emetic. It increases most of the secretions; diminishes the frequency o the pulse; when freely taken, powerfully influences the nervous system, occasioning faintness, etc., with dilatation of the pupils. Best adapted to gout, rheumatism, and neuralgic affections.

Dose.—4 to 6 grs. of the powder.

TINCTURA.

Green Hellebore, in coarse powder, 4 oz.; Rectified Spirit, 20: macerate the powder with 15 of the Spirit forty-eight hours, agitating occasionally, pack it in a percolator, let it drain, pour on the remainder of the Spirit, when it ceases to drop, press, filter, wash the marc with Spirit to make up 20. =(1 in 8).

A new preparation.

Dose.—5 to 20 minims.

VINA.

WINES.

Medicated Wines are of very ancient date, and were admitted into our earliest Pharmacopœias. Two only remain as representatives of the old Pharmacopœias—Vinum Antimonii and V. Ferri; the former was prepared by digesting 4 ounces of the Regulus of Antimony in powder with 3 pounds of "White" Wine (Pharmacopœia Londinensis, 1655). The latter (Vinum Chalybeatum) was made with Rhenish Wine and iron filings.

The Wines of former Pharmacopœias omitted from the British are:—Vinum Antimonii Potassio-Tartratis, Lond., now Vinum Antimoniale; Vinum Gentianæ, Edin.; Vinum Tabaci, Edin.; Vinum Veratri, Lond.

The following are the Wines of the British Pharmacopœia, the formulæ for which will be found under the names of the drugs from which they are prepared:—

Dose.		Proportion of active ingredients in the whole.
1 drm.	VINUM ALOES	1 in 26½
15 min.	VINUM ANTIMONIALE	2 grs. to 1 oz., or 1 in 240
	VINUM AURANTII	British Orange Wine.
20 min.	VINUM COLCHICI	(Corm) 1 in 5
1 drm.	VINUM FERRI	made with Iron Wire.
1 drm.	VINUM FERRI CITRATIS	8 grs. to 1 oz., or 1 in 60
5 min.	VINUM IPECACUANHÆ	1 in 20
15 min.	VINUM OPII	Ext. Opium 1 in 20
½ oz.	VINUM QUINIÆ	1 gr. to 1 oz., or 1 in 480.
1 drm.	VINUM RHEI	33 grs. to 1 oz., or 1 in 15½.
	VINUM XERICUM.	

VINUM XERICUM.

SHERRY.

A Spanish Wine, containing about seventeen or eighteen per cent. of Alcohol. Unless good sound Sherry is used, the preparations are apt to spoil in keeping.

All Medicinal Wines are made with Sherry, except Vin. Ferri Citratis and Vinum Quiniæ.

ZINCUM.

ZINC.

Zn, eq. 32·5; or **Zn**, eq. 65.

A bluish-white metal, of peculiar taste and of a perceptible smell when rubbed; laminated, and with a crystalline fracture. Sp. g. 6·8.

It occurs native, as a Sulphuret or as a Carbonate, and is separated from impurities by sublimation.

ZINCUM GRANULATUM.

GRANULATED ZINC.

Fuse Zinc of Commerce in an earthen crucible, heated to a sufficient degree to melt the Zinc, but not to produce combustion, pour it in a very thin stream into a bucket of cold water, afterwards dry the Zinc.

Used to preserve Liquor Zinci Chloridi, Zinci Chloridum, Zinci Sulphas.

The British Pharmacopœia has continued the preparations of Zinc that were in former Pharmacopœias, viz. :—

ZINCI ACETAS.
ZINCI CARBONAS.
ZINCI CHLORIDUM.
ZINCI OXIDUM.
ZINCI SULPHAS.
ZINCI VALERIANAS.

INCOMPATIBLES of Zinc salts are,—Alkalies and their Carbonates, Lime Water, Acetate of Lead, Nitrate of Silver, Astringent Vegetable Infusions or Decoctions, and Milk.

ANTIDOTES.—In case of poisoning with the salts of Zinc, warm demulcent drinks, such as linseed tea, barley water, emetics; if inflammatory symptoms follow, antiphlogistic means must be taken.

ZINCI ACETAS.

ACETATE OF ZINC.

$ZnO,C_4H_3O_3+2HO$, eq. 109·5; or $Zn(C_2H_3O_2)_2.2H_2O$, eq. 219.

Thin, translucent, and colourless crystalline plates, of pearly lustre.

Solubility: in water, 10 in 25.

Test.—A dilute watery solution is not affected by Chloride of Barium or Nitrate of Silver; and when slightly acidulated with Hydrochloric Acid, is not precipitated by Sulphuretted Hydrogen—indicating absence of Lead. After it has been boiled for a few minutes with a little Nitric Acid, it yields with Ammonia a white precipitate, entirely soluble without colour in an excess of the reagent (Oxide of Zinc).

Medicinal Properties.

Astringent. Similar to the Sulphate.

(Brit. 1864, Dub. U.S. Belg. Fr. and Pr.; not in others.)

Dose.—1 to 2 grs. as a tonic, 10 to 20 grs. as an emetic.

Not Officinal.

LOTIO.—Acetate of Zinc, 1 to 2 grs.; Water, 1 oz.: mix.

An astringent collyrium in ophthalmia, or as an injection in gonorrhœa after the acute stage has passed.

ZINCI CARBONAS.

CARBONATE OF ZINC.

$ZnO,CO_2+2ZnO+3HO$, eq. 170·5; or $ZnCO_3(ZnO)_2.3H_2O$, eq. 341.

A white, tasteless, inodorous powder.

Insoluble in water.

Test.—Its solution in dilute Nitric Acid is not precipitated by Chloride of Barium (indicating absence of sulphate), or Nitrate of Silver (absence of chloride), and gives with Carbonate of Ammonia a white precipitate, entirely soluble without colour in an excess of the reagent (Carbonate of Zinc).

Medicinal Properties.

Same as those of the Oxide of Zinc.

(Brit. 1864, Dub. U.S.; not in others.)

Dose.—2 to 10 grs.

ZINCI CHLORIDUM.

CHLORIDE OF ZINC.

ZnCl, eq. 68; or $ZnCl_2$, eq. 136.

In colourless opaque rods or tablets, very deliquescent and caustic.

Solubility in water, 10 in 4; freely in Rectified Spirit and in Ether.

Test.—Its watery solution is not affected by Chloride of Barium (indicating absence of Sulphuric Acid) or Oxalate of Ammonia (absence of Lime), and is not tinged blue by the Ferrocyanide or Ferridcyanide of Potassium (absence of Iron). Ammonia throws down a white precipitate entirely soluble in an excess of the reagent (Oxide of Zinc).

Medicinal Properties.

Internally, a weak solution is alterative and tonic; externally, applied as a caustic to malignant sores, either mixed with an equal proportion of flour or alone, and as it liquefies, sprinkle with plaster of Paris to prevent its spreading, care being taken that it does not come in contact with the edges of the skin.

(In all the Pharmacopœias; Austr. and Pr. Z. Chloratum; Belg. Chloruretum; Fr. Chlorure de Zinc.)

Dose.—½ to 1 or 2 grs.

Preparation.

LIQUOR.

Granulated Zinc, 8; Hydrochloric Acid, 22; Solution of Chlorine, q. s.; Carbonate of Zinc, ¼; Distilled Water, 10. Mix the acid and water in a porcelain dish, add the Zinc, and apply a gentle heat to promote the action until gas is no longer evolved; boil for half-an-hour, supplying the water lost by evaporation, and allow the product to cool. Filter it into a bottle and add solution of Chlorine by degrees, with frequent agitation, until the fluid acquires a permanent odour of Chlorine. Add the Carbonate of Zinc, in small quantities at a time, and with renewed agitation, until a brown

sediment appears. Filter the liquid into a porcelain basin, and evaporate until it is reduced to the bulk of 20.

(Dub.; not in others.)

ANTIDOTES.—In case of poisoning with Chloride of Zinc, emetics, warm demulcent drinks.

Dub. sp. g. 1·593; Sir W. Burnett's Solution, sp. g. 2·000.

ZINCI OXIDUM.

OXIDE OF ZINC.

ZnO, eq. 40·5; or **ZnO**, eq. 81.

A soft, white, tasteless, and inodorous powder.

Insoluble in water.

Test.—Dissolves without effervescence in diluted Nitric Acid, forming a solution which is not affected oy Chloride of Barium (absence of sulphates), or Nitrate of Silver (absence of chlorides), and gives, with Carbonate of Ammonia, a white precipitate which dissolves entirely without colour in any excess of the reagents.

Medicinal Properties.

Internally as a tonic, especially in spasmodic affections. Astringent and absorbent, employed externally in the form of powder or ointment, to slight excoriations and ulcerations.

(In all the Pharmacopœias; Austr. and Pr. Z. Oxydatum; Fr. by the dry as well as the humid process.)

Dose.—2 to 10 grs.

Makes into pills with Conf. Rosæ Caninæ.

Preparation.

UNGUENTUM.

Oxide of Zinc in very fine powder, 1; Benzoated Lard, $5\frac{1}{2}$: mix.
$=(1 \text{ in } 6\frac{1}{2})$.

(Lond. Edin. Dub. and U. S. 1 in 7; Fr. Pommade, Belg. and Pr. 1 in 10; not in others.)

ZINCI SULPHAS.

SULPHATE OF ZINC.

ZnO,SO_3+7HO, eq. 143·5; or $\mathbf{ZnSO_4,7H_2O}$., eq. 287.

In colourless, transparent, prismatic crystals, with a strong metallic styptic taste.

Soluble in water, 10 in 7. Insoluble in Rectified Spirit.

Test.—In watery solution is not tinged purple by Tincture of Galls—in-

dicating absence of Iron; and when acidulated with Sulphuric or Hydrochloric Acid, gives no precipitate with Sulphuretted Hydrogen—indicating absence of Lead and Copper. After it has been boiled for a few minutes with a little Nitric Acid, it yields with Ammonia a white precipitate, which is entirely soluble without colour in an excess of the reagent (Oxide of Zinc).

Medicinal Properties.

In small doses tonic and astringent; chiefly employed in spasmodic diseases, as epilepsy, chorea, tussis, etc.; in large doses a prompt emetic. As an astringent, chiefly externally, as an injection in fluor albus and in the advanced stages of gonorrhœa; and as a collyrium in ophthalmia, or a wash for indolent ulcers. It is also used as a styptic.

(In all the Pharmacopœias; Austr. and Pr. Z. Sulphuricum; Fr. Sulfate de Zinc.)

Dose.—As a tonic or astringent, 1 to 2 grs.; emetic, 10 to 30 grs.; an injection may be made with 1 to 3 grs. to an ounce of water.

ZINCI VALERIANAS.

VALERIANATE OF ZINC.

$ZnO,C_{10}H_9O_3$, eq. 133·5; or $Zn(C_5H_9O_2)_2$, eq. 267.

In bright white, pearly, tabular crystals, with a feeble odour of Valerianic Acid and a metallic taste.

Solubility in water, 1 in 120; in Rectified Spirit, 1 in 60; Ether, 1 in 500.

Test.—Its solution in hot water is not precipitated by Chloride of Barium. It gives, when heated with dilute Sulphuric Acid, a distillate (Valerianic Acid), which when mixed with the solution of Acetate of Copper, does not immediately affect the transparency of the fluid, but forms after a little time oily drops, which gradually pass into a bluish-white crystalline deposit.—Valerianate of Copper.

Medicinal Properties.

Antispasmodic, chiefly used in chorea, epilepsy, and in various neuralgic and hysterical affections. As a topical astringent in chronic conjunctivitis, as a collyrium, 1 or 2 grains to 1 ounce water.

(Brit. 1864, Dub. U. S. Austr. Belg. Fr. and Pr.; not in Lond. Edin.)

Dose.—1 to 6 or more grs., either in pill or solution.

Incompatibles.—All acids, soluble carbonates, most metallic Salts, vegetable astringents.

ZINGIBER.

GINGER.

The scraped and dried rhizome of *Zingiber officinale;* from plants cultivated in the West Indies, India, and other countries.

Medicinal Properties.

Aromatic, stimulant and carminative. It is given in dyspepsia, flatulency, and as an adjunct to purgative medicines. Used as a gargle in cases of relaxed uvula and tonsils.

(In all the Pharmacopœias; Fr. Gingembre.)

Dose.—In powder, 10 to 20 grs.

Contained in Conf. Opii, Conf. Scammonii, Inf. Sennæ, Pil. Scillæ Comp., Pulv. Cinnam. Comp., Pulv. Jalapæ Comp., Pulv. Opii Comp., Pulv. Rhei Comp., Pulv. Scammonii Comp., Syrupus Rhamni, Vin. Aloes.

Preparations.

SYRUPUS.

Strong Tincture of Ginger, 1; Syrup, 25: mix. =(1 in 27 nearly).

(Brit. 1864, Dub.; U. S. with Tincture; Lond. Edin. and Belg. with root, 1 in 20; not in others.)

Dose.—1 to 4 drms.

TINCTURA.

Ginger bruised, 1; Rectified Spirit, 8: macerate the Ginger forty-eight hours in 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, pour on the remaining spirit, and when it ceases to drop press, filter, and add spirit to make 8. =(1 in 8).

(Same as Brit. 1864; Lond. Edin. 1 in 16; Dub. 1 in 5; U. S. 1 in $3\frac{1}{2}$; (Belg. and Fr. 1 in 5 by weight); not in others.)

Dose.—10 to 30 min.

TINCTURA FORTIOR. *Syn.* Essentia Zingiberis.

Ginger, in powder, 10; Spirit, sufficient to percolate 20. Pack the Ginger tightly in a percolator, and pour over it carefully half of the Spirit, and after two hours add the remainder and as much more as is required to percolate 20 oz. =(1 in 2).

Dose.—5 to 20 minims.

Contained in Syrup of Ginger, =(1 in 27 nearly).

A new preparation.

APPENDIX.

ARTICLES EMPLOYED IN CHEMICAL TESTING.

ALCOHOL. Absolute Alcohol.

($C_4H_6O_2$, or C_2H_6O.)

Take of Rectified Spirit, 1 pint; Carbonate of Potash, 1½ oz.; Slaked Lime, 10 oz.: put the Carbonate of Potash and Spirit into a stoppered bottle, and allow them to remain in contact for two days, frequently shaking the bottle. Expose the Slaked Lime to a red heat in a covered crucible for half an hour, then remove it from the fire, and, when it has cooled, immediately put the Lime into a flask or retort, and add to it the Spirit from which the denser aqueous solution of Carbonate of Potash, which will have formed a distinct stratum at the bottom of the bottle, has been carefully and completely separated. Attach a condenser to the apparatus, and allow it to remain without any external application of heat for twenty-four hours; then applying a gentle heat, let the Spirit distil until that which has passed over shall measure 1½ fl. oz.; reject this, and continue the distillation into a fresh receiver until nothing more passes at a temperature of 200°.

Characters and Tests.—Colourless and free from empyreumatic odour. Specific gravity 0·795. It is entirely volatile by heat, is not rendered turbid when mixed with water, and does not cause anhydrous Sulphate of Copper to assume a blue colour when left in contact with it.

BENZOL.

($C_{12}H_6$, or C_6H_6.)

A colourless volatile liquid, obtained from coal tar. Specific gravity 0·85.

BORACIC ACID.

(BO_3. 3HO, or H_3BO_3.)

Tests.—Soluble in Alcohol. The solution burns with a green flame.

CHLORIDE OF BARIUM.

(BaCl. 2HO, or $BaCl_2$. $2H_2O$.)

COPPER FOIL.

Pure Metallic Copper, thin and bright.

GOLD, FINE.

Gold, free from metallic impurities.

HYPOSULPHITE OF SODA.

$NaO.S_2O_2. + 5HO$, or $Na_2H_2S_2O_4.4H_2O$.)

Test.—24·8 grains decolorize 100 measures of the volumetric solution of Iodine.

INDIGO.

($C_{16}H_5NO_2$, or C_8H_5NO.)

A blue pigment prepared from various species of *Indigofera*, Linn.

ISINGLASS.

The swimming bladder or sound of various species of *Acipenser*, Linn., prepared and cut into fine shreds.

LITMUS.

A blue pigment prepared from various species of *Roccella*, DC.

LITMUS PAPER, BLUE.

Unsized white paper steeped in Tincture of Litmus, and dried by exposure to the air.

LITMUS PAPER, RED.

Unsized white paper steeped in Tincture of Litmus which has been previously reddened by the addition of a very minute quantity of Sulphuric Acid, and dried by exposure to the air.

LITMUS TINCTURE.

Take of Litmus in powder, 1 oz.; Proof Spirit, 10 fl. oz.: macerate for two days in a closed vessel, and filter.

OXALIC ACID OF COMMERCE.

OXALIC ACID, PURIFIED.

($2HO.C_4O_6 + 4HO$, or $H_2C_2O_4.2H_2O$.)

Take of Oxalic Acid of Commerce, 1 pound; boiling Distilled Water, 30 fl. oz.: dissolve, filter the solution, and set it aside to crystallize. Pour off the liquor, and dry the crystals by exposure to the air on filtering-paper placed on porous bricks.

Test.—It is entirely dissipated by a heat below 350°.

OXALATE OF AMMONIA.

($2NH_4O.C_4O_6 + 2HO$, or $(NH_4)_2.C_2O_4.H_2O$.)

Take of Purified Oxalic Acid, 1 oz.; boiling Distilled Water, 8 fl. oz.; Carbonate of Ammonia, a sufficiency: dissolve the Oxalic Acid in the water, neutralize the solution at a boiling temperature, filter it while still hot, and set it by that crystals may form as it cools.

PLASTER OF PARIS.

Native Sulphate of Lime, $CaO,SO_3. + 2HO$, or $CaSO_4.2H_2O$, deprived of water by heat.

PLATINUM BLACK.

Platinum in a state of minute division obtained by adding excess of Carbonate of Soda and some Sugar to solution of Perchloride of Platinum, and boiling till a black precipitate is formed, which is washed and dried.

PLATINUM FOIL.

RED PRUSSIATE OF POTASH.

($K_3Fe_2C_{12}N_6$, or $K_6Fe_2C_{12}N_{12}$.)

Test.—Its solution in water gives no precipitate with Persulphate of Iron.

SUBACETATE OF COPPER OF COMMERCE.

Verdigris.

SULPHATE OF COPPER, ANHYDROUS.

(CuO,SO_3, or $CuSO_4$.)

Sulphate of Copper deprived of its water by a heat of 400°.

Characters. — A yellowish-white powder, which becomes blue when moistened with water.

SULPHIDE OF IRON.

(FeS, or FeS.)

Produced by applying the end of a rod of iron, heated to a white heat at a blacksmith's forge, to the end of a roll of Sulphur, and allowing the Sulphide of Iron, as it is formed, to run into a vessel of water.

SULPHURETTED HYDROGEN.

(HS, or H_2S.)

Take of Sulphide of Iron, ½ oz.; Water, 4 fl. oz.; Sulphuric Acid, a sufficiency: place the Sulphide of Iron and the Water in a gas-bottle closed with a cork perforated by two holes, through one of which passes air-tight a funnel tube of sufficient length to dip into the water, and through the other a tube for giving exit to the gas. Through the former pour from time to time a little of the Acid, so as to develop the Sulphuretted Hydrogen as it may be required.

TIN, GRANULATED.

Grain tin, reduced to small fragments by fusing and pouring it into cold water.

TURMERIC.

The rhizome of *Curcuma longa*, Linn.

TURMERIC PAPER.

Unsized white paper steeped in Tincture of Turmeric and dried by exposure to the air.

TURMERIC TINCTURE.

Take of Turmeric, bruised, 1 oz.; Rectified Spirit, 6 fl. oz.: macerate for seven days in a closed vessel, and filter.

II. TEST SOLUTIONS.

SOLUTION OF ACETATE OF COPPER.

Take of Subacetate of Copper of Commerce, in fine powder, ½ oz.; Acetic Acid, 1 fl. oz.; Distilled Water, a sufficiency: dilute the Acid with ½ fl. oz. of the Water; digest the Subacetate of Copper in the mixture, at a temperature not exceeding 212°, with repeated stirring, and continue the heat until a dry residue is obtained. Digest this in 4 oz. of boiling Distilled Water, and by the addition of more of the Water make up the solution to 5 fl. oz. Filter it.

SOLUTION OF ACETATE OF POTASH.

Take of Acetate of Potash, ½ oz.; Distilled Water, 5 fl. oz.: dissolve and filter.

SOLUTION OF ACETATE OF SODA.

Take of Acetate of Soda, ¼ oz.; Distilled Water, 5 fl. oz.: dissolve and filter.

SOLUTION OF ALBUMEN.

Take of the White of one Egg; Distilled Water, 4 fl. oz.: mix by trituration in a mortar, and filter through clean tow first moistened with distilled water. This solution must be recently prepared.

SOLUTION OF AMMONIO-NITRATE OF SILVER.

Take of Nitrate of Silver, in crystals, ¼ oz.; Solution of Ammonia, ½ fl. oz., or a sufficiency; Distilled Water, a sufficiency: dissolve the Nitrate of Silver in 8 fl. oz. of Water, and to the solution add the Ammonia until the precipitate first formed is nearly dissolved. Clear the solution by filtration, and then add Distilled Water, so that the bulk may be 10 fl. oz.

SOLUTION OF AMMONIO-SULPHATE OF COPPER.

Take of Sulphate of Copper, in crystals, ½ oz.; Solution of Ammonia, a sufficiency; Distilled Water, a sufficiency: dissolve the Sulphate of Copper in 8 fl. oz. of the water, and to the solution add the Ammonia until the precipitate first formed is nearly dissolved. Clear the solution by filtration, and then add Distilled Water, so that the bulk may be 10 fl. oz.

SOLUTION OF AMMONIO-SULPHATE OF MAGNESIA.

Take of Sulphate of Magnesia, 1 oz.; Chloride of Ammonium, ½ oz.; Solution of Ammonia, ½ fl. oz.; Distilled Water, a sufficiency: dissolve the Sulphate of Magnesia and Chloride of Ammonium in 8 fl. oz. of the water, and to the solution add the Ammonia, and as much Distilled Water as will make up the bulk to 10 fl. oz. Filter it.

SOLUTION OF BORACIC ACID.

Take of Boracic Acid, 50 grs.; Rectified Spirit, 1 fl. oz.: dissolve and filter.

SOLUTION OF BROMINE.

Take of Bromine, 10 minims; Distilled Water, 5 fl. oz.: place the Bromine in a bottle furnished with a well-fitting stopper, pour on the water, and shake several times. Keep it excluded from the light.

SOLUTION OF CARBONATE OF AMMONIA.

Take of Carbonate of Ammonia, in small pieces, ½ oz.; Distilled Water, 10 fl. oz.: dissolve and filter.

SOLUTION OF CHLORIDE OF AMMONIUM.

Take of Chloride of Ammonium, 1 oz.; Distilled Water, 10 fl. oz.: dissolve and filter.

SOLUTION OF CHLORIDE OF BARIUM.

Take of Chloride of Barium, in crystals, 1 oz.; Distilled Water, 10 fl. oz.: dissolve and filter.

SOLUTION OF CHLORIDE OF CALCIUM.

Take of Chloride of Calcium, 1 oz.; Distilled Water, 10 fl. oz.: dissolve and filter.

SOLUTION (SATURATED) OF CHLORIDE OF CALCIUM.

Take of Chloride of Calcium, 4 oz.; Distilled Water, 5 fl. oz.: dissolve and filter.

SOLUTION OF CHLORIDE OF GOLD.

Take of Fine Gold, reduced by a rolling machine to a thin lamina, 60 grs.; Nitric Acid, 1½ fl. oz.; Hydrochloric Acid, 7 fl. oz.; Distilled Water, a sufficiency: place the Gold in a flask with the Nitric Acid and 6 fl. oz. of the Hydrochloric Acid, first mixed with 4 fl. oz. of the water, and digest until it is dissolved. Add to the solution the additional fluid ounce of Hydrochloric acid, evaporate at a heat not exceeding 212° until acid vapours cease to be given off, and dissolve the Chloride of Gold thus obtained in 5 fl. oz. of Distilled Water. The solution should be kept in a stoppered bottle.

SOLUTION OF CHLORIDE OF TIN.

Take of Granulated Tin, 1 oz.; Hydrochloric Acid, 3 fl. oz.; Distilled Water, a sufficiency: dilute the Acid in a flask with 1 fl. oz. of the water, and, having added the Tin, apply a moderate heat until gas ceases to be evolved. Add as much of the water as will make up the bulk to 5 fl. oz., and transfer the solution, together with the undissolved Tin, to a bottle with an accurately ground stopper.

SOLUTION OF GELATINE.

Take of Isinglass, in shreds, 50 grs.; Warm Distilled Water, 5 fl. oz.: mix and digest for half an hour on a water-bath with repeated shaking, and filter through clean tow moistened with distilled water.

SOLUTION OF IODATE OF POTASH.

Take of Iodine, 50 grs.; Chlorate of Potash, 50 grs.; Nitric Acid, 8 mins. Distilled Water, 10½ fl. oz.: rub the Iodine and Chlorate of Potash together to a fine powder; place the mixture in a Florence flask, and, having poured upon it half an ounce of the water acidulated with the Nitric Acid, digest at a gentle heat until the colour of the Iodine disappears. Boil for one minute; then transfer the contents of the flask to a capsule, and evaporate to perfect dryness at 212°. Finally dissolve the residue in the remaining 10 oz. of Distilled Water; filter the solution, and keep it in a stoppered bottle.

SOLUTION OF IODIDE OF POTASSIUM.

Take of Iodide of Potassium, 1 oz.; Distilled Water, 10 fl. oz.: dissolve and filter.

SOLUTION OF OXALATE OF AMMONIA.

Take of Oxalate of Ammonia, ½ oz.; Warm Distilled Water, 20 fl. oz.: dissolve and filter.

SOLUTION OF PERCHLORIDE OF PLATINUM.

Take of Thin Platinum Foil, ¼ oz.; Nitric Acid, a sufficiency; Hydrochloric Acid, a sufficiency; Distilled Water, 7 fl. oz: mix a fl. oz. of the Nitric Acid with 4 fl. oz. of the Hydrochloric Acid and 2 fl. oz. of the water; pour the mixture into a small flask containing the Platinum, and digest at a gentle heat, adding more of the acids mixed in the same proportion, should this be necessary, until the metal is dissolved. Transfer the solution to a porcelain dish, add to it a fl. drm. of Hydrochloric Acid, and evaporate on a water-bath, until acid vapours cease to be given off. Let the residue be dissolved in the remaining 5 oz. of Distilled Water. Filter, and preserve it in a stoppered bottle.

SOLUTION OF PHOSPHATE OF SODA.

Take of Phosphate of Soda, in crystals, 1 oz.; Distilled Water, 10 fl. oz.: dissolve and filter.

SOLUTION OF RED PRUSSIATE OF POTASH.

Take of Red Prussiate of Potash, in crystals, ¼ oz.; Distilled Water, 5 fl. oz.: dissolve and filter.

SOLUTION OF SULPHATE OF INDIGO.

Take of Indigo, dry, and in fine powder, 5 grs.; Sulphuric Acid, 10 fl. oz.: mix the indigo in a fl. drm. of the Sulphuric Acid in a small test tube, and apply the heat of a water-bath for an hour. Pour the blue liquid into the remainder of the acid, agitate the mixture, and, when the undissolved Indigo has subsided, decant the clear liquid into a stoppered bottle.

SOLUTION OF SULPHATE OF IRON.

Take of Granulated Sulphate of Iron, 10 grs.; Boiling distilled Water, 1 fl. oz.: dissolve and filter. The solution should be recently prepared.

SOLUTION OF SULPHATE OF LIME.

Take of Plaster of Paris, ¼ oz.; Distilled Water, 1 pint: rub the Plaster of Paris in a porcelain mortar, for a few minutes, with 2 oz. of the Water, introduce the mixture thus obtained into a pint bottle containing the rest of the Water; shake well several times, and allow the undissolved Sulphate to subside. When this has occurred, filter.

SOLUTION OF SULPHIDE OF AMMONIUM.

Take of Solution of Ammonia, 5 fl. oz.: put 3 fl. oz. of the Ammonia into a bottle, and conduct into this a stream of Sulphuretted Hydrogen so long as the gas continues to be absorbed; then add the remainder of the Ammonia, and transfer the solution to a green-glass bottle furnished with a well-ground stopper.

SOLUTION OF TARTARIC ACID.

Take of Tartaric Acid, in crystals, 1 oz.; Distilled Water, 8 fl. oz.; Rectified Spirit, 2 fl. oz.: dissolve the Tartaric Acid in the Water, add the Rectified Spirit, and preserve the Solution in a stoppered bottle.

SOLUTION OF YELLOW PRUSSIATE OF POTASH.

Take of Yellow Prussiate of Potash, in crystals, ¼ oz.; Distilled Water, 5 fl. oz.: dissolve and filter.

III. TEST SOLUTIONS FOR VOLUMETRIC ESTIMATIONS.

The processes for volumetric estimations may be performed either with British or with metrical weights and measures, and the solutions are so arranged that they will be of the same strength, and the same indications will be obtained in using them, whichever system is employed, without the *necessity* of altering any of the figures by which the quantities of the substances tested or of the test solutions required in the process, are expressed.

According to the British system, the quantities of the substances to be tested are expressed in grains by weight, whilst the quantities of the test solutions employed in testing are expressed in grain-measures,—the grain-measure being the volume of a grain of Distilled Water.

According to the metrical system, the quantities of the substances to be tested are expressed in grammes by weight, whilst the quantities of the test Solutions em-

ployed in testing are expressed in cubic centimetres,—the cubic centimetre being the volume of a gramme of Distilled Water.

As the cubic centimetre bears the same relation to the gramme that the grain-measure bears to the grain, the one system may be substituted for the other with no difference in the results, excepting that, by the metrical system, all the quantities will be expressed in relation to a weight (the gramme) which is fifteen times greater than the British grain.

In practice it will be found convenient in substituting metrical for British weights and measures, to reduce the values of all the numbers to one-tenth, by moving the decimal points, and this has been done in the tables appended to the descriptions of the volumetric solutions. The quantities indicated in the Pharmacopœia, which in grains and grain-measures can be conveniently used, would be found inconveniently large if the same numbers of grammes and cubic centimetres were employed.

The following apparatus is required in the preparation and use of these solutions.

For British weights and measures:—

1. A flask which, when filled to a mark on the neck, contains exactly 10,000 grains of Distilled Water at 60°. The capacity of the flask is therefore 10,000 grain-measures.

2. A graduated cylindrical jar which, when filled to 0, holds 10,000 grains of Distilled Water, and is divided into 100 equal parts.

3. A burette. A graduated glass tube which, when filled to 0, holds 1,000 grains of Distilled Water, and is divided into 100 equal parts. Each part therefore corresponds to 10 grain-measures.

For metrical weights and measures:—

1. A glass flask which, when filled to a mark on the neck, contains one litre or 1000 cubic centimetres.

2. A graduated cylindrical jar which, when filled to 0, contains one litre (1000 cubic centimetres), and is divided into 100 equal parts.

3. A burette. A graduated tube which, when filled to 0, holds 100 cubic centimetres, and is divided into 100 equal parts.

(One cubic centimetre is the volume of one gramme of Distilled Water at 4° C. = 392 Fahr.* 1000 cubic centimetres equal one litre.)

Volumetric solutions, before being used, should be shaken, in order that they may be throughout of uniform strength. They should also be preserved in stoppered bottles. All measuremeuts should be made at 60° Fahr.

VOLUMETRIC SOLUTION OF BICHROMATE OF POTASH.

(Bichromate of Potash, $KO,2CrO_3 = 147{\cdot}5$, or $K_2Cr_2O_7 = 295$.

Take of Bichromate of Potash, 147·5 grs.; Distilled Water, a sufficiency: put the Bichromate of Potash into the 10,000 grain flask and, having half filled the flask with water, allow the salt to dissolve; then dilute the solution with more water, until it has the exact bulk of 10,000 grain-measures. 1000 grain-measures of this solution contain $\frac{1}{10}$th of an equivalent in grains (= 14·75 grains) of Bichromate of Potash, and, when added to a Solution of Protosalt of Iron acidulated with Hydrochloric Acid, are capable of converting $\frac{1}{10}$th of six equivalents of Iron (= 16·8 grains) from the state of protosalt to that of persalt.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. Thus 14·75 grammes of Bichromate of Potash should be made to form 1000 cubic

* It is customary to make the measurements with metrical apparatus at 60° Fahr.

centimetres of solution. 100 cubic centimetres of this solution contain $\frac{1}{100}$th of an equivalent in grammes of the Bichromate of Potash (= 1·475 grammes), and are capable of converting $\frac{1}{100}$th of six equivalents of iron (1·68 grammes) from the state of protosalt to that of persalt.

This solution is used for determining the proportion of Protoxide of Iron in the following preparations. It is known that the whole of the protosalt has been converted into a persalt when a minute drop of the liquid, placed in contact with a drop of the solution of Red Prussiate of Potash on a white plate ceases to strike with it a blue colour.

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Ferri Arsenias . . .	20	=	170	or	2·0	=	17·0
„ Carb. Sacch. .	20	=	330	or	2·0	=	33·0
„ Oxid. Magn. .	20	=	83·0	or	2·0	=	83·0
„ Phosphas . .	20	=	250	or	2·0	=	25·0

VOLUMETRIC SOLUTION OF HYPOSULPHITE OF SODA.

(Hyposulphite of Soda Crystallized, $NaO,S_2O_2.+5HO=124$, or $Na_2H_2S_2O_4 4H_2O=248$.)

Take of Hyposulphite of Soda, in crystals, 280 grs.; Distilled Water, a sufficiency: dissolve the Hyposulphite of Soda in 10,000 grain-measures of water. Fill a burette with this solution and drop it cautiously into 1000 grain-measures of the Volumetric Solution of Iodine, until the brown colour is just discharged. Note the number of grain-measures (n) required to produce this effect; then put 8000 grain-measures of the same solution into a graduated jar, and augment this quantity by the addition of Distilled Water until it amounts to $\frac{8000\times1000}{n}$ grain-measures. If, for example, $n=950$, the 8000 grain-measures of solution should be diluted to the bulk of $\frac{8000\times1000}{950}=8421$ grain-measures. 1000 grain-measures of this solution contain $\frac{1}{10}$th of two equivalents in grains (=24·8 grains) of the Hyposulphite, and therefore correspond to $\frac{1}{10}$th of an equivalent in grains (=12·7 grains) of Iodine.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres of this solution contain $\frac{1}{100}$th of two equivalents of Hyposulphite in grammes (=2·48 grammes), and therefore correspond to $\frac{1}{100}$th of an equivalent in grammes (1·27 grammes) of Iodine.

This solution is used for testing the following substances. In each case, excepting that of Iodum, a solution of Iodide of Potassium and Hydrochloric Acid are added to the substance, and the amount of Iodine so liberated is indicated by this solution.

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Calx Chlorata . . .	10·0	=	850	or	1·00	=	85·0
Iodum	12·7	=	1000	or	1·27	=	100·0
Liq. Calc. Chloratæ .	61·0	=	500	or	6·00	=	50·0
„ Chlori	439·0	=	750	or	43·90	=	75·0
„ Sodæ Chloratæ .	70·0	=	500	or	7·00	=	50·0

VOLUMETRIC SOLUTION OF IODINE.

(Iodine, I=127 or I=127.)

Take of Iodine, 127 grains; Iodide of Potassium, 180 grains; Distilled Water, a sufficiency: put the Iodide of Potassium and the Iodine into the 10,000 grain flask, fill the flask to about two-thirds its bulk with Distilled Water, gently agitate until solution is complete, and then dilute the solution with more water until it has the exact bulk of 10,000 grain-measures. 1000 grain-measures of this solution contain $\frac{1}{10}$th of an equivalent in grains (12·7 grains) of Iodine, and therefore correspond to 1·7 grains of Sulphuretted Hydrogen, 3·2 grains of Sulphurous, and 4·95 grains of Arsenious Acid.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres contain 1·27 grammes of Iodine, and correspond to 0·17 grammes of Sulphuretted Hydrogen, 0·32 grammes of Sulphurous, and 0·495 grammes of Arsenious Acid.

This solution is used for testing the following substances. It is dropped from the burette into the liquid to be tested until free Iodine begins to appear in the solution.

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Acid. Arsenios. . . .	4·0	=	808	or	0·40	=	80·8
„ Sulphurosum . .	34·7	=	1000	or	3·47	=	100·0
Liquor Arsenicalis. . .	441·5	=	808	or	44·15	=	80·8
„ Arsenici Hydrochloricus . .	441·5	=	810	or	44·15	=	81·0

VOLUMETRIC SOLUTION OF NITRATE OF SILVER.

(Nitrate of Silver, AgO,NO_5=170, or $AgNO_3$=170.)

Take of Nitrate of Silver, 170 grs.; Distilled Water, a sufficiency: put the Nitrate of Silver into the 10,000 grain flask, and, having half filled the flask with water, allow the salt to dissolve; then dilute the solution with more water until it has the exact bulk of 10,000 grain-measures. The solution should be kept in an opaque stoppered bottle. 1000 grain-measures of this solution contain $\frac{1}{10}$th of an equivalent in grains (17 grains) of Nitrate of Silver.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres contain $\frac{1}{100}$th of an equivalent in grammes (1·7 grammes) of Nitrate of Silver.

It is used in testing the following substances:—

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Acid. Hydrocyan. . . .	270	=	1000	or	27·0	=	100·0
Potass. Bromid.	10	=	840	or	1·0	=	84·0
Sodæ Arsenias (dry) . .	10	=	1613	or	1·0	=	161·3

VOLUMETRIC SOLUTION OF OXALIC ACID.

Crystallized Oxalic Acid, $HO.C_2O_3.2HO$=63, or $H_2C_2O_4.2H_2O$=126.)

Take of Purified Oxalic Acid, in crystals, quite dry, but not effloresced,

630 grs.; Distilled Water, a sufficiency: put the Oxalic Acid into the 10,000 grain flask, fill the flask to about two-thirds of its bulk with water, allow the acid to dissolve, and then dilute the solution with more water until it has the exact bulk of 10,000 grain-measures. 1000 grain-measures of this solution contain half an equivalent in grains (=63 grains) of Oxalic Acid, and are therefore capable of neutralizing one equivalent in grains of any alkali or alkaline carbonate.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres contain $\frac{1}{20}$ of an equivalent in grammes (=6·3 grammes) of Oxalic Acid, and will neutralize $\frac{1}{10}$ of an equivalent in grammes of an alkali.

The following substances are tested with this solution:—

	British Weights and Measures.				Metrical Weights and Measures.			
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.	
Ammoniæ Carb.	59·0	=	1000	or	5·90	=	100·0	
Borax	191·0	=	1000	or	19·10	=	100·0	
Liq. Ammon.	85·0	=	500	or	8·50	=	50·0	
„ „ Fort. . .	52·3	=	1000	or	5·23	=	100·0	
„ Calcis	4380·0	=	200	or	438·00	=	20·0	
„ „ Sacchar. . . .	460·2	=	254	or	46·02	=	25·4	
„ Plumbi Subacet. . .	413·3	=	810	or	41·33	=	81·0	
„ Potassæ	462·9	=	482	or	46·29	=	48·2	
„ „ Efferves. . .	4380·0	=	150	or	438·0	=	15·0	
„ Sodæ „ . . .	458·0	=	470	or	45·80	=	47·0	
„ „ Efferves. . .	4380·0	=	178	or	438·0	=	17·8	
Plumbi Acetas	38·0	=	200	or	3·80	=	20·0	
Potassa Caustica	56·0	=	900	or	5·60	=	90·0	
Potassæ Bicarb.	50·0	=	500	or	5·00	=	50·0	
„ Carb.	83·0	=	980	or	8·30	=	98·0	
„ Citras	102·0	=	1000	or	10·20	=	100·0	
„ Tartras	113·0	=	1000	or	11·30	=	100·0	
„ „ Acida . .	188·0	=	1000	or	18·80	=	100·0	
Soda Caustica	40·0	=	900	or	4·00	=	90·0	
„ Tartarata	141·0	=	1000	or	14·1	=	100·0	
Sodæ Bicarb.	84·0	=	1000	or	8·40	=	100·0	
„ Carb..	143·0	=	960	or	14·30	=	96·0	

VOLUMETRIC SOLUTION OF SODA.

(Hydrate of Soda, NaOHO=40, or NaHO=40.)

Take of Solution of Soda, a sufficiency; Distilled Water, a sufficiency: fill a burette with the Solution of Soda, and cautiously drop this into 63 grs. of Purified Oxalic Acid dissolved in about 2 oz. of water, until the acid is exactly neutralized as indicated by litmus. Note the number of grain-measures (n) of the solution used, and having then introduced 9000 grain-measures of the Solution of Soda into a graduated jar, augment this quantity by the addition of water, until it becomes $\frac{9000\times1000}{n}$ grain-measures. If, for example, n=930, the 9000 grain-measures should be augmented to $\frac{9000\times1000}{930}$=9677

grain-measures. 1000 grain-measures of this solution contain one equivalent in grains (40 grains) of Hydrate of Soda, and will therefore neutralize one equivalent in grains of any monobasic acid.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres contain $\frac{1}{10}$th equivalent in grammes (4 grammes) of Hydrate of Soda, and will neutralize $\frac{1}{10}$ of an equivalent in grammes of an acid.

This solution is used for testing the following substances :—

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Acetum	445·4	=	402	or	44·54	=	40·2
Acid. Acet.	182·0	=	1000	or	18·20	=	100·0
„ „ Dil. . . .	440·0	=	313	or	44·00	=	31·3
„ „ Glac. . .	60·0	=	990	or	6·00	=	99·0
„ Citric.	70·0	=	1000	or	7·00	=	100·0
„ Hydrochl. . . .	114·8	=	1000	or	11·48	=	100·0
„ „ Dil. . .	345·0	=	1000	or	34·50	=	100·0
„ Nitric.	90·0	=	1000	or	9·00	=	100·0
„ „ Dil. . . .	361·3	=	1000	or	36·13	=	100·0
„ Nit. Hydrochl. .	352·4	=	920	or	35·24	=	92·0
„ Sulph.	50·6	=	1000	or	5·06	=	100·0
„ „ Arom. . .	304·2	=	830	or	30·42	=	83·0
„ „ Dil. . . .	359·0	=	1000	or	35·90	=	100·0
„ Tart. „ . . .	75·0	=	1000	or	7·50	=	100·0

SYMBOLS AND EQUIVALENT WEIGHTS OF THE ELEMENTARY BODIES MENTIONED IN THE BRITISH PHARMACOPŒIA.

Elementary Bodies.	Symbols and Equivalents.	
	Old System.	New System.
Aluminium	Al = 13·75	Al = 27·5
Antimony (Stibium)	Sb = 122	Sb = 122
Arsenic	As = 75	As = 75
Barium	Ba = 68·5	Ba = 137
Bismuth	Bi = 210	Bi = 210
Boron	B = 11	B = 11
Bromine	Br = 80	Br = 80
Cadmium	Cd = 56	Cd = 112
Calcium	Ca = 20	Ca = 40
Carbon	C = 6	C = 12
Cerium	Ce = 46	Ce = 92
Chlorine	Cl = 35·5	Cl = 35·5
Chromium	Cr = 26·25	Cr = 52·5
Copper (Cuprum)	Cu = 31·75	Cu = 63·5
Gold (Aurum)	Au = 196·5	Au = 196·5
Hydrogen	H = 1	H = 1
Iodine	I = 127	I = 127
Iron (Ferrum)	Fe = 28	Fe = 56
Lead (Plumbum)	Pb = 103·5	Pb = 207
Lithium	L = 7	L = 7
Magnesium	Mg = 12	Mg = 24
Manganese	Mn = 27·5	Mn = 55
Mercury (Hydrargyrum)	Hg = 100	Hg = 200
Nitrogen	N = 14	N = 14
Oxygen	O = 8	O = 16
Phosphorus	P = 31	P = 31
Platinum	Pt = 98·5	Pt = 197
Potassium (Kalium)	K = 39	K = 39
Silver (Argentum)	Ag = 108	Ag = 108
Sodium (Natrium)	Na = 23	Na = 23
Sulphur	S = 16	S = 32
Tin (Stannum)	Sn = 59	Sn = 118
Zinc	Zn = 32·5	Zn = 65

WEIGHTS AND MEASURES OF THE BRITISH PHARMACOPŒIA.

WEIGHTS.

1 Grain*	gr.	
1 Ounce	oz.	= 437·5 grains.
1 Pound	lb. = 16 ounces	= 7000 „

MEASURES OF CAPACITY.

1 Minim	min.	
1 Fluid Drachm	fl. drm.	= 60 minims.
1 Fluid Ounce	fl. oz.	= 8 fluid drachms.
1 Pint	O.	= 20 fluid ounces.
1 Gallon	C.	= 8 pints.

MEASURES OF LENGTH.

1 line = $\frac{1}{12}$ inch.
1 inch = $\frac{1}{39 \cdot 1393}$ seconds pendulum.
12 „ = 1 foot.
36 „ = 3 feet = 1 yard.
Length of pendulum vibrating seconds of mean time in the latitude of London, in a vacuum at the level of the sea } 39·1393 inches.

RELATION OF MEASURES TO WEIGHTS.

1 Minim		0·91	grain of water.
1 Fluid Drachm	weighs	54·68	„
1 Fluid Ounce	„ 1 ounce or	437·5	„
1 Pint	„ 1·25 pounds or	8750·0	„
1 Gallon	„ 10 pounds or	70,000·0	„

1 Cubic Inch of Distilled Water, in air, at 62° = 252·456 grains.
1 Cubic Inch of Distilled Water, in vacuo, at 62° = 252·722 grains.

WEIGHTS AND MEASURES OF THE METRICAL SYSTEM.

WEIGHTS.

1 Milligramme	= the thousandth part of	one gramme, or	0·001 gramme.
1 Centigramme	= the hundredth „	0·01	„
1 Decigramme	= the tenth „	0·1	„
1 Gramme	= weight of a cubic centimetre of water at its greatest density, viz. 4° C. = 39·2 F.	1·0	„
1 Decagramme	= ten grammes „	10·0	„
1 Hectogramme	= one hundred grammes „	100·0	„
1 Kilogramme	= one thousand grammes „	1000·0	„

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* = weight of $\frac{1}{252 \cdot 456}$ cubic inch of pure water.

MEASURES OF CAPACITY.

1 Millitre = 1 cubic centimetre, or the measure of 1 gramme of water.
1 Centilitre = 10 „ „ 10 „ „
1 Decilitre = 100 „ „ 100 „ „
1 Litre = 1000 „ „ 1000 „ (1 kilo.)

MEASURES OF LENGTH.

1 Millimetre = the thousandth part of one metre, or 0·001 metre.
1 Centimetre = the hundredth „ 0·01 „
1 Decimetre = the tenth part „ 0·1 „
1 Metre = the ten-millionth part of a quarter of the meridian of the earth.

RELATION OF THE WEIGHTS OF THE BRITISH PHARMACOPŒIA TO THE METRICAL WEIGHTS.

1 Pound = 453·5925 grammes.
1 Ounce = 28·3495 „
1 Grain = 0·0648 „

RELATION OF MEASURES OF CAPACITY OF THE BRITISH PHARMACOPŒIA TO THE METRICAL MEASURES.

1 Gallon = 4·543487 litres.
1 Pint = 0·567936 „ or 567·936 cubic centimetres.
1 Fluid Ounce = 0·028396 „ 28·396 „
1 Fluid Drachm = 0·003549 „ 3·549 „
1 Minim = 0·000059 „ 0·059 „

RELATION OF THE METRICAL WEIGHTS TO THE WEIGHTS OF THE BRITISH PHARMACOPŒIA.

1 Milligramme = 0·015432 grains.
1 Centigramme = 0·15432 „
1 Decigramme = 1·5432 „
1 Gramme = 15·432 „
1 Kilogramme = 2 lbs. 3 oz. 119·8 grs. or 15432·348 „

RELATION OF THE METRICAL MEASURES TO THE MEASURES OF THE BRITISH PHARMACOPŒIA.

1 Millimetre = 0·03937 inches.
1 Centimetre = 0·39371 „
1 Decimetre = 3·93708 „
1 Metre = 39·37079 „ or 1 yard 3·7 inches.
1 Cubic Centimetre = 15·432 grain-measures.
1 Litre = 1 pint 15 oz. 2 drs. 11 m. or 15432·348 grain-measures.

DIRECTIONS FOR PERCOLATING TINCTURES.

After the materials have been macerated for forty-eight hours in three-fourths of the menstruum ordered, percolation will be most efficiently performed by decanting the liquid, pressing the ingredients in the hand, and carefully packing them, in small portions at a time, in a conical percolator, so that the mass shall be uniformly tight throughout. The decanted liquid may then be poured upon the ingredients and suffered to percolate; the remainder of the menstruum being afterwards poured upon them in order to chase the strong tincture out. As soon as the liquid ceases to drop, the ingredients are to be removed and pressed. Any deficiency in the product may be made up by adding more of the menstruum and repeating the pressure.

"RECENT PREPARATIONS."

Not Officinal.

GRANULATED PREPARATIONS,

MADE IN THE MANNER DIRECTED IN THE BRITISH PHARMACOPŒIA FOR PREPARING SODÆ CITRO-TARTRAS EFFERVESCENS.

The following is the quantity usually contained in 60 grains = an ordinary teaspoonful; which is considered a commencing dose :—

Bromide of Ammonium, 2 grs.
„ „ Potassium, 2 grs.
„ „ Sodium, 2 grs.
Carbonate of Bismuth, 2 grs.
„ „ Iron, 2 grs.
„ „ Lithia, 2 grs.
Citrate of Iron, 3 grs.
„ „ „ and Quinine, 3 grs.
„ „ Cinchonine, 2 grs.
Citrate of Quinine, 1 gr.
Hypophosphite of Lime, 2 grs.
Iodide of Iron, 1 gr.
„ „ Potassium, 2 grs.
„ „ Sodium, 2 grs.
Nitrate of Cerium, 1 gr.
„ „ Potash, 5 grs.
Phosphate of Iron, 1 gr.

The several imitations in a granular effervescent form of the following Mineral Waters; the dose being a large teaspoonful :—

Carlsbad.
Cheltenham.
Fachingen.
Kissingen.
Marienbad.
Pullna.
Selters.
Vichy.

Also for Gingerade and Lemonade.

SUPPOSITORIA.

SUPPOSITORIES.

Officinal.

ACIDI TANNICI.
Tannic Acid, 3 grs. in each.

HYDRARGYRI.
Mercurial Ointment, 5 grs. in each.

MORPHIÆ.
Hydrochlorate of Morphia, ½ gr. in each.

PLUMBI COMPOSITA.
Acetate of Lead, 3 grs. Opium, 1 gr. in each.

Not Officinal.

Anthelmintic.

Santonine, 5 grs.

Astringent.

Sulphate of Copper, 2 grs.
Iron Alum, 3 grs.
Galls, in powder, 5 grs.

Astringent and Sedative.

Galls, in powder, 5 grs. } mixed.
Opium, in powder, 1 gr. }

Caustic.

Dried Sulphate of Zinc, 10 grs.

Cicatrizing and Emollient.

Oxide of Bismuth, 10 grs.
Borax, in powder, 5 grs.
Oxide of Zinc, 10 grs.

Purgative.

Aloin, 1 gr. }
Soap, 5 grs. } mixed.
Elaterium, ½ gr.
Gamboge, 5 grs.
Podophyllin, 1 gr.

Sedative.

Belladonna Extract, 2 grs.
Hyoscyamus Extract, 5 grs.
Opium, in powder, 2 grs.

PESSARIES, OR VAGINAL SUPPOSITORIES.

Not Officinal.

(NO PESSARIES ARE ORDERED IN THE BRITISH PHARMACOPŒIA.)

Antacid.

Bicarbonate of Soda, 15 grs.

Alterative and Resolvent.

Iodide of lead, 5 grs.
Iodide of Lead, 5 grs. } mixed.
Atropine, $\frac{1}{20}$ gr. }
Iodide of Potassium, 10 grs.
Bromide of Potassium, 10 grs.
Mercurial Ointment, 30 grs.

Astringent.

Alum, in powder, 15 grs.
Alum, 15 grs. } mixed.
Catechu, 15 grs. }
Iron Alum, 10 grs.
Acetate of Lead, 7 grs.
Acetate of Lead, 5 grs. } mixed.
Opium Powder, 2 grs. }
Matico, in powder, 10 grs.
Sulphate of Iron, dried, 10 grs.
Gallic Acid, 10 grs.
Tannic Acid, 10 grs.

Hæmostatic.

Perchloride of Iron crystals, 5 grs.

Caustic.

Red Oxide Mercury, 2 grs.
Sulphate of Zinc, dried, 10 grs.

Cicatrizing and Emollient.

Oxide of Bismuth, 15 grs.
Borax, in powder, 15 grs.
Oxide of Zinc, 15 grs.

Deodorant.

Carbolate of Lime, 15 grs.
Carbolic Acid, 2 grs.

Sedative.

Atropine, $\frac{1}{20}$ gr.
Belladonna Extract, 3 grs.
Hemlock Extract, 5 grs.
Morphia, Hydrochlorate, $\frac{1}{2}$ gr.
Opium, in powder, 2 grs.

URETHRAL SUPPOSITORIES, OR MEDICATED BOUGIES.

Not Officinal.

(Cylinders about $2\frac{1}{2}$ inches long; diameter of a No. 9 bougie.)

Acetate of Lead, $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$ gr.
Nitrate of Silver, $\frac{1}{4}$ gr.
Tannic Acid, 1 gr.
Ext. Belladonna, 2 grs.
Ext. Opium, 2 grs.

White Bismuth, 10 grs.
White Bismuth, 10 grs. } mix.
Acetate of Lead, $\frac{1}{2}$ gr. }
Perchloride of Iron, $\frac{1}{2}$, $\frac{3}{4}$, and 1 gr.

Theobroma Oil is the usual substance employed for forming these agents, but Stearine and mixtures of Fats and Wax may be employed. The temperature at which these solidify will be found at page 248.

MEDICATED PLEDGETS OF COTTON.

The following (weighing 30 grs. each) and containing severally the quantities of ingredients as follows, have been introduced by Dr. Greenhalgh for the local treatment of Uterine affections:—

Bromide of Potassium, 4 grs.
Iodide of Potassium, 4 grs.
Iodine, 2 grs.
Matico, ʒss Tincture.

Hydrochlorate of Morphia, $\frac{3}{4}$ gr.
Persulphate of Iron, 3 grs.
Tannic Acid, $2\frac{1}{2}$ grs.

AMERICAN ECLECTIC REMEDIES.

ALTERATIVE AND APERIENT.

Baptisin (*Wild Indigo*). Purgative and emetic, 1 to 5 grains; given in typhus and gangrene.

Corydalin (*Turkey Pea Root*). Antisyphilitic, alterative, tonic, ½ to 5 grs., and given with hydrastin.

Euonymin (*Wahoo Bark*). Mild aperient, 1 to 2 grs.; expectorant, diuretic, ¼ to 1 gr.

Iridin (*Blue Flag*). Renal alterative, ⅛ to ¼ gr.; purgative, diuretic, emetic, 1 to 5 grs.

Leptandrin (*Veronica Virginica*). Hepatic alterative, ¼ to ½ gr.; purgative, 2 to 4 grs.

Phytolaccin (*Poke Root*). Scorbutic alterative, ⅛ to ¼ gr.; purgative, slow emetic, ¼ to 1 gr.; employed in chronic rheumatism.

Podophyllin (*May Apple*). Alterative, ⅛ to ¼ gr., given in the place of mercury; purgative, ¼ to 1 gr., acting after six hours.

Rumicin (*Yellow Dock*). Astringent, antiscorbutic, alterative, 2 to 5. grs.

Sanguinarin (*Blood Root*). Hepatic alterative, ¼ to 1 gr.; somewhat narcotic.

TONIC, ETC.

Asclepedin (*Pleurisy Root*). Expectorant and diaphoretic, 1 to 4 grs.

Caulophyllin (*Blue Cohosh*). Uterine and diuretic tonic, ¼ to 1 gr.; parturient, 2 to 4 grs.

Cimicifugin (*Actæa racemosa*). Nervous sedative tonic, 1 to 6 grs., in nervous affections, attended with chorea, and much employed in rheumatism.

Cornin (*Dogwood*). Stimulant astringent tonic, 1 to 10 grs.; increasing the pulse in force and frequency.

Cypripedin (*Ladies' Slipper*). Nervous stimulant, 1 to 3 grs.; in hypochondria.

Gelsemin (*Yellow Jessamin*). Nervous sedative, ½ to 2 grs.; antispasmodic anodyne.

Geranin (*Cranesbill*). Astringent tonic, 1 to 5 grs., and given with hydrastin in dysentery and diarrhœa.

Hydrastin (*Golden Seal*). Dyspeptic tonic and febrifuge, 1 to 5 grs.

Menispermin (*Yellow Parilla*). Dyspeptic tonic, 1 to 2 grs.; aperient, 5 grs.

Scutellarin (*Skullcap*). Nervous non-exciting tonic, 2 to 6 grs.; given in neuralgia.

Senecionin (*Life Root*). Diuretic and emmenagogue, 3 to 5 grs.; given in strangury.

INDEX.

The Names adopted by the British Pharmacopœia are put in Roman letters; all others, whether referring to Officinal or Non-officinal Medicines, are put in Italics. The Appendix is not indexed.

ACA	Dose.	Page
Acaciæ Gummi		1
„ *Mistura*		1
„ Mucilago	1 to 8 drms.	1
Acetum		2
„ Cantharidis		65
„ Scillæ	15 to 40 minims	221
Acide Acétique, crystallizable		3
„ „ *du Bois*		2
„ *Phénique.* *See* Acidum Carbolicum		6
„ *Prussique Médicinale*		9
Acidum Aceticum		2, 3
„ „ *Aromaticum*		4
„ „ *concentratissimum*		3
„ „ *concentratum*		3
„ „ dilutum	1 to 3 drms.	3
„ „ glaciale		3
„ Arseniosum	$\frac{1}{60}$ to $\frac{1}{12}$ gr.	4
„ Benzoicum	5 to 15 grs.	5
„ Carbolicum	1 gr.	6
„ Carbolici Glycerinum	5 to 10 minims	6
„ Citricum	10 to 30 grs.	6
„ Gallicum	3 to 5 grs.—10 to 60 in albumenuria	7
„ Gallici Glycerinum	10 to 60 minims	8
„ Hydrochloricum		8
„ „ dilutum	10 to 30 minims	8
„ Hydrocyanicum dilutum	2 to 8 minims	8
„ *Meconicum*		175
„ *Muriaticum purum*		8
„ Nitricum, sp. g. 1420		9
„ „ dilutum	10 to 30 minims	10
„ Nitro-hydrochloricum dilutum	5 to 20 minims	10
„ „ „ „ *Bath*		11

ACI	Dose.	Page
Acidum *Opianicum*		175
„ Phosphoricum dilutum	10 to 30 minims	11
„ *Prussicum* (*Scheele*)		8
„ *Pyroligneum*		2
„ Sulphuricum		12
„ „ Aromaticum	5 to 30 minims	12
„ „ dilutum	5 to 20 minims	13
„ Sulphurosum	½ to 1 drm.	13
„ Tannicum	3 to 10 grs.	14
„ Tannici Glycerinum	10 to 40 minims	14
„ „ Suppositoria	3 grs. each	14
„ „ Trochisci	½ gr. each.—1 to 6 loz.	14
„ Tartaricum	10 to 30 grs.	15
Aconiti Folia		15
„ Extractum	1 to 2 grs.	16
„ *Extr. Rad. Alcoholic.*	½ gr.	17
„ Linimentum	1 in 1	16
„ Radix		16
„ *Succus*	15 to 20 minims	16
„ Tinctura	1 in 8—5 to 10 minims	16
„ *Tinct., Fleming's*		16
Aconitia		17
„ Unguentum		17
Aconitine Ointment	1 in 60	17
Actæa Racemosa		17
„ „ *Tinct.*	30 to 60 minims	17
Adeps præparatus		17
„ Benzoatus		18
„ *odoriferus*		18
„ *Oxygenatus*		18
„ *Myristicæ* (Ol. Myrist. expressum)		170
Æther	20 to 40 minims	18
„ *Anæsthetic compound*		20
„ purus		20
„ *Sulphuricus Alcoholicus*		19
„ *Chloricus.* *See* Spir. Chloroformi.		
Ætheris Nitrosi Spiritus	½ to 2 drms.	235
„ Spiritus	30 to 60 minims	19
Albumen Ovi		20
Alcohol Amylicum		20
Aloe Barbadensis	2 to 4 grs.	20
Aloes Barbadensis Enema	40 grs.	21
„ „ Extractum	1 to 3 grs.	21
„ „ Pilula	4 to 8 grs.	21
„ „ „ et Ferri	5 to 10 grs.	21
„ Socotrina	2 to 6 grs.	21
„ Socotrinæ Decoctum	½ to 1½ oz.	22
„ „ Enema	40 grs.	22
„ „ Extractum	1½ to 3 grs.	22
„ „ Pilula	5 to 10 grs.	22
„ „ „ et Assafœtidæ	5 to 10 grs.	22

ALO	Dose.	Page
Aloes Socotrinæ et Myrrhæ Pilula	5 to 10 grs.	22
„ „ Tinctura	1 to 2 drms.	23
„ „ Vinum	1 to 2 drms.	23
Aloine	1 to 2 grs.	21
Alum Cataplasm		24
„ *Gargle*		24
„ *Iron*		24
„ *Whey*		24
Alumen	10 to 15 grs.	23
„ exsiccatum		24
Aluminium		23
Amidon		31
„ *Glycérée*		31
Ammonia		26
Ammoniæ Pura Liquida		29
Ammoniaci Emplastr. c. Hydrarg.		25 and 131
„ Mistura	½ to 1 oz.	25
Ammoniacum	10 to 20 grs.	24
„ *Carbonicum*		28
„ *Causticum Solutum*		29
Ammoniæ Acetatis Liquor	2 to 6 drms.	27
„ *Aqua.* *See* Liquor		29
„ Benzoas	10 to 20 grs.	27
„ Carbonas	3 to 10 grs.	28
„ Citratis Liquor	2 to 6 drms.	28
„ *Hydrochloras*	10 to 15 grs.	26
„ Linimentum		29
„ Liquor	10 to 20 minims	29
„ „ fortior		29
„ *Murias.* *See* Ammonii Chloridum.		
„ Phosphas	5 to 20 grs.	30
„ *Sesquicarbonas* (*see* Ammoniæ Carbonas)		28
„ Spiritus Aromaticus	20 to 60 minims	28
„ Spiritus Fœtidus		29
„ *Tinctura composita*		30
Ammonii Bromidum	2 to 20 grs.	25
„ „ *Gargle*		26
„ „ (*Lozenges*)		26
„ Chloridum	10 to 15 grs.	26
„ „ *Lotion*		26
„ „ *Lozenges*		26
„ *Iodidum*	2 to 5 grs.	26
Ammonium		25
„ *Carbonicum.* *See* Ammoniæ Carbonas.		
Amygdala Amara		30
Amygdalæ Amaræ Mistura		30
Amygdala Dulcis		30
Amygdalæ *Confectio*		31
„ Mistura	1 to 2 oz.	31
„ Oleum	2 to 4 drms.	31
„ Pulvis compositus	1 to 2 drms.	31

AMY	Dose.	Page
Amyl, Hydride		182
Amyli Glycerinum		31
„ Mucilago		31
Amylum		31
„ *Iodatum*		32
Anethi Aqua	½ to 1 oz.	32
„ Fructus		32
„ Oleum	1 to 4 minims	32
Anisi Essentia	1 to 4 minims	32
„ Oleum	10 to 20 minims	32
Anthemidis Flores		33
„ Extractum	2 to 10 grs.	33
„ Infusum	1 to 3 oz.	33
„ Oleum	2 to 4 minims	33
Antidotes to Acids, Arsenious		4
„ „ Muriatic		8
„ „ Nitric		9
„ „ Prussic		9
„ „ Sulphuric		13
„ Aconite		16
„ Alkalies, Potash		195
„ „ Soda		195
„ Antimony		36
„ Arsenic		4
„ Arseniate of Iron		108
„ Atropia		43
„ Belladonna		48
„ Cannabis Indica		64
„ Cantharides		65
„ Chloroform		79
„ Chloride of Lime		78
„ Colchicum		86
„ Conium		90
„ Croton Oil		95
„ Digitalis		99
„ Elaterium		100
„ Hyoscyamus		139
„ Iron, Arseniate of		108
„ Lead		190
„ Lobelia		156
„ Mercury		136
„ Morphia		176
„ Nux Vomica		172
„ Opium		176
„ Savine		214
„ Strychnia		239
Antimoniale Vinum	1 in 240. 10 to 60 minims	37
Antimonialis Pulvis	2 to 6 grs.	34
Antimonii Oxidum	1 to 3 grs.	34
„ *Oxysulphuretum.* *See* Ant. Sulphuratum.		
„ *Sulphuretum aureum.* *See* Ant. Sulphuratum.		

ANT	Dose.	Page
Antimonii Sulphuretum præcipitatum. *See* Ant. Sulphuratum.		
Antimonii Chloridi Liquor		34
Antimonii et Potassæ Tartras. *See* Antimonium Tartaratum.		
Antimonium		33
„ *Depuratum*		34
„ Nigrum		35
„ „ præparatum		35
„ Sulphuratum	1 to 5 grs.	35
„ Tartaratum „ *Tartarizatum*	Diaphoretic . $\frac{1}{16}$ to $\frac{1}{6}$ gr. Depressant . $\frac{1}{8}$ to 1 grs. Emetic . . . 1 to 3 grs.	36
„ Unguentum	1 in 5	36
Aqua (*group*)		38
„ *Ammoniæ*		29
„ Anethi	$\frac{1}{2}$ to 1 oz.	32
„ Aurantii Floris	$\frac{1}{2}$ to 1 oz.	44
„ *Calcis*		59
„ Camphoræ	1 to 2 oz.	62
„ Carui	1 to 2 oz.	70
„ Cinnamomi	1 to 2 oz.	84
„ destillatæ (*group*)		38
„ Fœniculi	1 to 2 oz.	121
„ *Lithiæ Effervescens*		155
„ Laurocerasi	5 to 30 minims	148
„ Menthæ Piperitæ	1 to 2 oz.	163
„ Menthæ Viridis	1 to 2 oz.	164
„ *Naphæ.* *See* Aq. Flor. Aurant.		44
„ *Picis*		186
„ *Opii*		178
„ Pimentæ	1 to 2 oz.	185
„ *Potassæ Effervescens*		197
„ Rosæ	1 to 2 oz.	211
„ Sambuci		215
„ *Sodæ Effervescens*		230
Argenti Nitras	$\frac{1}{8}$ to $\frac{1}{3}$ gr.	39
Argenti Oxidum	$\frac{1}{2}$ to 2 grs.	40
Argentum		39
„ purificatum		41
Armoraciæ Radix		41
„ Spiritus compositus	1 to 3 drms.	41
„ *Infusum compositum*	1 to 2 oz.	41
Arnicæ Radix		41
„ Tinctura	1 to 2 drms.	42
Arnica Opodeldoc		42
Arsenias Ferri	$\frac{1}{16}$ gr.	5 and 107
„ Sodæ		229
Arseniatis Sodæ Liquor	2 to 8 minims	5
Arsenicalis Liquor	2 to 8 minims	4
Arsenical Caustic Powders		5
Arsenical Paste for Dentists		5
Arsenici Iodidum	$\frac{1}{30}$ gr.	5

	ARS	Dose.	Page
Arsenicum			42
Arsenicum album. *See* Acidum Arseniosum.			
Arsenici Hydrochlorici Liquor		2 to 8 minims	5
Assafœtida		5 to 20 grs.	42
Assafœtidæ Enema		30 grs.	43
„ Pilula composita		5 to 10 grs.	43
„ „ et Aloes		5 to 10 grs.	22
„ Tinctura		½ to 1 drm.	43
„ *Spir. Ammoniæ.* *See* Ammoniæ Spiritus Fœtidus			29
Atropia			43
Atropiæ Liquor		1 minim	43
„ Sulph.			44
„ „ Liquor			44
„ Unguentum			44
Atropine Gelatine			44
„ *Paper*			44
Aurantii Floris Aqua		½ to 1 oz.	44
„ „ Syrupus		1 to 2 drms.	44
„ Cortex			45
„ Infusum		1 to 2 oz.	45
„ „ compositum		1 to 2 oz.	45
„ Syrupus		1 to 2 drms.	45
„ Tinctura		1 to 2 drms.	45
„ Vinum			45
Axungia. *See* Adeps.			
Balneum Alkalinum			231
„ *Sulphuretum*			196
Balsamum Canadense. *See* Terebinthina Canadensis.			
Balsamum Peruvianum		10 to 15 minims	46
„ „ *Unguentum*			46
„ Tolutanum		10 to 20 grs.	46
Bath of Acidum Nitrohydrochloricum dilutum			11
Baume de Vie			22
Beberiæ Sulphas		1 to 3 grs. tonic. 5 to 10 grs. antiperiodic	47
Beberu Bark			171
Belæ Fructus			47
„ Extractum Liquidum		1 to 2 drms.	48
Belladonnæ Folia			48
„ Emplastrum			48
„ Extractum		¼ to ½ gr.	48
„ *Suppositoria*			50
„ *Succus*			50
„ Tinctura		5 to 20 minims	49
„ Unguentum		1 in 6½	49
„ Radix			49
„ Linimentum		1 in 1	49
„ *Linimentum et Chloroformi*			50
Benzoated Lard			18
Benzoic Acid		5 to 15 grs.	5
Benzoinum		10 to 30 grs.	50

BEN	Dose.	Page
Benzoini Tinctura composita	½ to 1 drm.	50
„ *Tinctura simplex*		51
„ *Unguentum*		51
Beurre d'Antimoine		35
„ *de Cacao*		248
Bismuthi Carbonas	5 to 20 grs.	51
„ Liquor et Am. Citratis	½ to 1 drm.	52
„ *Lotio*		55
„ Subnitras	5 to 15 grs.	52
„ Trochisci 2 grs. each.	1 to 6 doz.	52
„ *Unguentum*	1 in 5	52
„ *Nitras et B. album.* *See* Bismuthi Subnitras		52
Bismuthum purificatum		51
Black Drop (Cook)	4 to 8 minims	179
Blistering Fluid		66
„ Paper		65
Bois de Campeche		128
„ *de Gayac*		127
Borax	5 to 30 grs.	53
Boracis Glycerinum	1 in 4¾	53
„ *Lotio*		54
„ Mel	1 in 8	53
„ *Tinct. et Myrrhæ*		54
„ *Unguentum*		54
Brandish's Alcali		195
Brandy		237
Brecknell's Pure Yellow Soap		218
Bromide of Ammonium	8 to 12 grs.	25
„ „ *Lozenges*		25
„ Potassium		192
Bromum		54
Broom, Decoctum		222
„ Juice		222
„ Tops		222
Buchu Folia	20 to 40 grs.	54
„ Infusum	1 to 2 oz.	54
„ Tinctura	1 to 2 drms.	54
Buckthorn Juice		207
„ Syrup		207
Butter of Antimony		35
Butter of Cacao, or Oil of Theobroma		248
Cadmium		55
Cadmii Iodidum		55
„ „ Unguentum	1 in 8	55
Cajuputi Oleum	1 to 5 minims	55
„ Spiritus 1 in 50.	30 to 60 minims	56
Calabar Bean	1 to 3 grs.	183
„ Extract	$\frac{1}{16}$ to ¼	183
Calcaria Hyperchlorosa		57
Calcii Chloridum		56

CHL		Dose.	Page
Calcii Chloridum			
„ „	*in Crystals*		56
„	*Chloridi Liquor*	30 minims	56
Calcis Carbonas præcipitata		10 to 100 grs.	58
„	*Carbonas.* *See* Creta præparata.		
„	Hydras		58
„	Linimentum		59
„	Liquor		59
„ „	Chloratæ		57
„	Liquor Saccharata		59
„	*Hypophosphis*	3 to 5 grs.	60
„	Phosphas	10 to 40 grs.	59
Calcium			56
Calomelas. *See* Hydr. Subchloridum			136
Calumbæ Radix		10 to 20 grs.	60
„	Extractum	2 to 10 grs.	60
„	Infusum	1 to 2 oz.	60
„	Tinctura	½ to 2 drms.	61
Calx			56
„	Chlorata		57
„	*Chlorinata*		57
Cambogia		1 to 5 grs.	61
Cambogiæ Pilula composita		5 to 10 grs.	61
Camphora		2 to 10 grs.	62
Camphoræ Aquæ		1 to 2 oz.	62
„	Linimentum		62
„ „	compositum		62
„	*Mistura*		62
„	Spiritus. 1 in 10.	10 to 30 minims	63
„	Tinct. compositum	15 to 60 minims	63
„ „	*c. Opio*		
„	*Essentia*		63
„	*c. Creta*		63
„	*Ceratum*		63
Camphor Balls			63
Cannelle			84
Canellæ Albæ Cortex			63
Cannabis Indica			63
„ „	Extractum	¼ to 1 grain	64
„ „	Tinctura	5 to 20 minims	64
Cantharis			64
Cantharidis Acetum			65
„	Charta Epispastica		65
„	Emplastrum		65
„ „	Calefaciens		65
„	Liquor Epispasticus		66
„	Tinctura	5 to 20 minims	66
„	Unguentum	1 in 8	66
Capsici Fructus		1 to 5 grs.	66
„	Tinctura	10 to 20 minims	67
Capsicin			67

CAP	Dose	Page
Capsici Linimentum		67
„ *Charta*		67
Carbo Animalis purificatus	20 to 60 grs.	68
Carbo Ligni	20 to 60 grs.	68
Carbonis Ligni Cataplasma		68
Carbolic Acid	1 gr.	6
„ „ Glycerine of	5 minims	6
Carbon, Tetrachloride of		79
Carbonate d'Ammoniaque		28
Cardamomum	5 to 20 grs.	69
Cardamomi Tinctura composita	½ to 2 drms.	69
Carron Oil		59
Carui Fructus		69
„ Aqua	1 to 2 oz.	70
„ Oleum	2 to 4 minims	70
Caryophylli Infusum	1 to 2 oz.	70
„ Oleum	1 to 4 minims	70
Caryophyllum	5 to 10 grs.	70
Cascarillæ Cortex	10 to 30 grs.	71
„ Infusum	1 to 2 oz.	71
„ Tinctura	½ to 2 drms.	71
Cassiæ Pulpa	Laxative, 60 to 120 grs. Purgative, 1 to 2 oz.	71
Castoreum	5 to 10 grs.	72
Castorei Tinctura	½ to 1 drm.	72
Cataplasma *Aluminis*		24
„ Carbonis	½ oz. for 1 cataplasm	68
„ Conii	1 oz. of powder for a poultice	89
„ Fermenti		75
„ Lini		152
„ Sinapis		226
„ Sodæ Chloratæ		232
Cataplasmata (*group*)		72
Catechu pallidum	10 to 30 grs.	72
„ Infusum	1 to 2 oz.	73
„ Pulvis compositus	15 to 30 grs.	73
„ Tinctura	½ to 2 drms.	73
„ Trochisci	1 gr. each. 1 to 3 loz.	73
„ *Nigrum*		73
Cera alba		74
„ flava		75
Ceratum Camphoræ		63
„ *Cantharidis*		66
„ *Resinæ*		207
„ *Sabinæ*		214
„ *Saponis.* *See* Emplastrum Cerati Saponis		217
Cerevisiæ Fermentum	½ to 2 oz.	75
„ „ Cataplasma		75
Cerii Oxalas	1 to 2 grs.	76
Cetaceum	20 to 60 grs.	76
Cetacei *Mistura*		77
„ Unguentum		66

	Dose.	Page
Cetraria		77
Cetrariæ Decoctum	1 to 2 oz.	77
Cevadilla		213
Charta Epispastica		65
Chemical Food (Parrish's)		117
Chinæ Tinctura		83
Chirata		68
Chiratæ Infusum	1 to 2 oz.	77
„ Tinctura	10 to 20 minims	78
Chlori Liquor	10 to 20 minims	78
„ Vapor		58
Chloride of Calcium		56
Chloroformum	1 to 5 minims	79
Chloroformi Linimentum	1 in 2	79
„ Spiritus	20 to 60 minims	79
„ Tinct. comp.	20 to 60 minims	80
„ *Liquor Camphoratus*		80
„ „ *compositus*	5 to 10 minims	80
„ *Unguentum*	1 in 3	80
„ Vapor	15 minims	80
Cholera Mixture	1 oz.	94
Cinchona		80
Cinchonæ flavæ Cortex	Tonic, 15 grs. Antiperiodic, 60 to 120 grs.	81
„ Decoctum	1 to 2 oz.	82
„ Extractum liquidum	10 to 30 minims	82
„ Infusum	1 to 2 oz.	82
„ Tinctura	1 to 2 drms.	82
„ pallidæ Cortex	10 to 60 grains	83
„ Tinctura composita	½ to 2 drms.	83
„ rubræ Cortex		83
Cinnamomi Aqua	1 to 2 oz.	84
„ Cortex	10 to 20 grs.	84
„ Oleum	1 to 4 minims	84
„ Pulvis compositus	3 to 10 grs.	84
„ Tinctura	1 to 2 drms.	84
Citric Acid		6
Coccus	⅓ gr.	85
Cocci Tinctura	30 to 90 minims	85
Codeia	⅛ to 1 gr.	174
Codeiæ Syrupus	1 to 2 drms.	179
Colchici Cormus	2 to 8 grs.	85
„ Extractum	1 to 2 grs.	85
„ „ Aceticum	1 to 2 grs.	86
„ Vinum	10 to 30 minims	86
„ Semina		86
„ „ Tinctura	15 to 30 minims	86
„ *Tinctura composita*	15 to 30 minims	86
„ „ *Florum*	10 to 30 minims	86
„ *Vinum Seminis*	20 minims	86
Cold Cream		75
Collodium		87

COL	Dose.	Page
Collodium Flexile		87
Colloid Styptic		87
Collyrium Hydrargyri		136
Colocynthidis Pulpa	2 to 8 grs.	87
„ Extractum compositum	2 to 5 grs.	88
„ Pilula composita	5 to 10 grs.	88
„ „ „ et Hyoscyami	5 to 10 grs.	88
Concombre Sauvage		100
Confectio *Amygdalæ*. *See* Pulv. Amygd. Comp.		
„ *Aromatica* (Pulv. Arom.). *See* Cinnamomum.		
„ Opii	5 to 20 grs.	176
„ Piperis	60 to 120 grs.	185
„ Rosæ Caninæ	1 drm.	211
„ „ Gallicæ	½ to 1 drm.	212
„ Scammonii	10 to 30 grs.	220
„ Sennæ	1 to 2 drms.	223
„ Sulphuris	2 to 4 drms.	241
„ Terebinthinæ	1 to 4 drms.	247
Confectiones (*group*)		88
Conii Folia	3 to 10 grs.	89
„ Fructus		90
„ Tinctura	½ to 1 drm.	90
„ Cataplasma		89
„ Extractum	4 to 8 grs.	89
„ Pilula composita	5 to 10 grs.	89
„ Succus	30 to 60 minims	90
„ Vapor	20 minims	90
Conserva Amygdalarum. *See* Pulv. Amygd. comp.		
Copaiba	20 to 60 minims	90
„ Oleum	5 to 30 minims	91
Coriandri Fructus	20 to 60 grs.	91
„ Oleum	1 to 4 minims	91
Corrosive Sublimate		135
Creasotum	1 to 3 minims	91
Creasoti Mistura	1 to 2 oz.	92
„ Unguentum		92
„ Vapor	12 minims.	92
Cremor Frigidus		75
„ *Lithargyri*		191
Creta		93
„ præparata	10 to 100 grs.	93
Cretæ Mistura	1 to 2 oz.	93
„ Pulvis Aromaticus	30 to 60 grs.	93
„ „ „ cum Opio	10 to 40 grs.	94
Crocus		94
Croci Tinctura	½ to 2 drms.	94
Crotonis Oleum	⅓ to 1 minim	94
„ Linimentum	1 in 8	95
Cubebæ	1 to 2 drms.	95
„ Oleum	5 to 20 minims	95
„ Tinctura	1 to 2 drms.	95

CUP	Dose.	Page
Cupri Sulphas	½ gr.—10 grs. an emetic	96
Cuprum		96
Cuspariæ Cortex	10 to 40 grs.	97
„ Infusum	1 to 2 oz.	97
Cusso	¼ to ½ oz.	97
„ Infusum	4 oz.	97
Cydonium		97
Decocta (*group*)		98
Decoctum Aloes compositum	4 to 12 drms.	22
„ Cetrariæ	1 to 2 oz.	72
„ Cinchonæ flavæ	1 to 2 oz.	87
„ *Gallæ*		123
„ *Cydonii*		98
„ Granati radicis	1 to 2 oz.	127
„ *Gummi Rubri*		74
„ Hæmatoxyli	1 to 2 oz.	128
„ Hordei		129
„ Papaveris		180
„ Pareiræ	1 to 2 oz.	181
„ Quercus	1 to 2 oz.	205
„ Sarsæ	10 to 20 oz. } per diem	218
„ „ compositum	10 to 20 oz. }	218
„ Scoparii	2 to 4 oz.	222
„ Taraxaci	2 to 4 oz.	246
„ *Tritici Repentis*	4 to 8 oz.	252
„ Ulmi	4 to 6 oz.	253
Depilatory		234
De Valangin's Solution	3 to 5 minims	5
Digitalinum	$\frac{1}{60}$ to $\frac{1}{30}$ gr.	98
Digitalis Folia	½ to 2 grs.	99
„ Infusum	¼ to ½ oz.	99
„ *Succus*	5 to 10 minims	99
„ Tinctura	10 to 30 minims	99
Donovan's Solution (*Arsenic*)	10 to 30 minims	5
Dulcamara		100
Dulcamaræ Infusum	1 to 2 oz.	100
Eau de Laitue		148
Eau de Luce	5 to 10 minims	30
Ecbalium Fructus		100
Egg Albumen		20
Elaterium	$\frac{1}{10}$ to ½ gr.	100
Elemi		101
„ Unguentum		101
Elixir, Paregoric		63
„ *of Vitriol*	5 to 10 minims	12
„ „ *Mynsicht's*	5 to 10 minims	12
Emplastra (*group*)		101
Emplastrum Ammoniaci cum Hydrargyro	1 in 5 nearly	25, 131

EMP	Dose.		Page
Emplastrum Belladonnæ			48
„ Calefaciens			65
„ Cantharidis			65
„ Cerati Saponis			217
„ *Dyachylon Gommé*			122
„ Ferri	1 in 11		115
„ Galbani	1 in 11		122
„ Hydrargyri	1 in $3\frac{2}{3}$		131
„ *Lithargyri.* *See* Empl. Plumbi			189
„ Opii	1 in 10		176
„ Picis			185
„ „ *cum Cantharide*			65
„ Plumbi			189
„ „ Iodidi	1 in 9		189
„ Resinæ	1 in $9\frac{1}{2}$		207
„ *Roborans.* *See* Empl. Ferri			115
„ Saponis			217
„ *Thuris.* *See* Empl. Ferri			115
Enemata (*group*)			102
Enema Aloes Barbadensis	40 grs.	For each Enema.	21
„ „ Socotrinæ	40 grs.		22
„ Assafœtidæ	30 grs. Assafœtida		43
„ *Catharticum* (En. Magnes. Sulph.)			160
„ *fœtidum* (En. Assafœt.)			43
„ Magnesiæ Sulphatis	1 oz.		160
„ Opii	$\frac{1}{2}$ drm. Tinct.		176
„ Tabaci	20 grs.		245
„ Terebinthinæ	1 oz.		247
Ergota	20 to 30 grs.		102
Ergotæ Extractum liquidum	15 to 30 minims		102
„ Infusum	1 to 2 oz.		103
„ Tinctura	15 to 60 minims		103
Essentia Anisi	10 to 20 minims		32, 103
„ *Camphoræ*			63
„ Menthæ Piperitæ	10 to 20 minims		163
„ *Zingiberis*			
Extracta (*group*)			104
Extractum Aconiti	1 to 2 grs.		16
„ *Aconiti Rad. Alcoholic.*	$\frac{1}{2}$ gr.		17
„ Aloes Barbadensis	1 to 3 grs.		21
„ „ Socotrinæ	$1\frac{1}{2}$ to 3 grs.		22
„ Anthemidis	2 to 10 grs.		33
„ Belæ liquidum	1 to 2 drms.		48
„ Belladonnæ	$\frac{1}{4}$ to 1 gr.		48
„ Calumbæ	2 to 10 grs.		60
„ Cannabis Indicæ	$\frac{1}{4}$ to 1 gr.		64
„ Cinchonæ flavæ liquidum	10 to 30 minims		82
„ Colchici	1 to 2 grs.		85
„ „ Aceticum	1 to 2 grs.		86
„ Colocynthidis compositum	2 to 5 grs.		88
„ Conii	4 to 8 grs.		89

EXT	Dose.	Page
Extractum Ergotæ liquidum	15 to 30 minims	102
„ *Fuci Vesiculosi*		122
„ Filicis liquidum	30 to 60 minims	121
„ Gentianæ	10 to 15 grs.	124
„ Glycyrrhizæ	½ to 1 drm.	126
„ Hæmatoxyli	10 to 30 grs.	128
„ Hyoscyami	3 to 6 grs.	138
„ *Ignatiæ Amaræ*	⅛ to 1 gr.	172
„ Jalapæ	5 to 15 grs.	144
„ Krameriæ	5 to 20 grs.	147
„ Lactucæ	5 to 10 grs.	148
„ Lupuli	5 to 10 grs.	156
„ *Lupulinæ*	3 to 6 grs.	157
„ Mezerii Ethereum		164
„ Nucis Vomicæ	⅛ to 1 gr.	172
„ Opii	½ to 1 gr.	176
„ „ liquidum	12 to 20 minims	177
„ Papaveris	2 to 5 grs.	180
„ „ *liquidum*	30 to 60 minims	181
„ Pareiræ	10 to 20 grs.	181
„ „ liquidum	½ to 2 drms.	181
„ Physostigmatis	$\frac{1}{16}$ to ¼ gr.	183
„ Quassiæ	3 to 5 grs.	204
„ Rhei	3 to 10 grs.	208
„ Sarsæ liquidum	1 to 4 drms.	219
„ *Sarsæ comp. liquidum*	1 to 4 drms.	219
„ Stramonii	¼ gr.	238
„ Taraxaci	5 to 15 grs.	246
Farina Tritici		106
Fel Bovinum purificatum	3 to 6 grs.	106
Ferri Acetatis Tinctura	5 to 30 minims	107
„ „ „ *Etherea*	10 to 20 minims	107
„ Arsenias	$\frac{1}{16}$ to 1 gr.	107
„ Carbonas saccharata	5 to 20 grs.	108
„ Emplastrum		115
„ et Ammoniæ Citras	5 to 10 grs.	109
„ „ Quiniæ Citras	5 to 10 grs.	111
„ Iodidum	1 to 5 grs.	111
„ Iodidi Pilula	3 to 8 grs.	112
„ „ Syrupus	20 to 60 minims	112
„ „ *Liquor*	20 to 60 minims	112
„ Oxidum magneticum	5 to 10 grs.	112
„ *Oxidum nigrum.* *See* Ferri Ox. Magneticum.		
„ Perchloridi Liquor		114
„ „ „ fortior		113
„ „ Tinct.	10 to 30 minims	114
„ Pernitratis Liquor	10 to 40 minims	115
„ Peroxidum, now called Hydratum	5 to 30 grs.	115
„ „ hydratum, now Humidum	2 to 4 drms.	115
„ Persulphatis Liquor		118

FER	Dose.	Page
Ferri Phosphas	5 to 10 grs.	116
„ Phosphatis Syrupus	1 to 4 drms.	117
„ *Phosphatis Syrupus comp. Parrish*	1 to 2 drms.	117
„ *Potassio-tartras.* *See* Ferrum Tartaratum.		
„ *Pulvis.* *See* Ferrum Redactum.		
„ Sesquioxidum		115
„ Sulphas	3 to 5 grs.	117
„ „ exsiccata	½ to 3 grs.	118
„ „ granulata	3 to 5 grs.	118
„ Redacti Trochisci, 1 gr. each	1 to 6 loz.	119
„ Vinum	1 to 4 drms.	120
Ferrum		106
„ redactum	1 to 5 grs.	119
„ Tartaratum	6 to 20 grs.	120
Ficus		120
Filix Mas	60 to 180 grs.	120
Filicis Extractum liquidum	30 to 60 minims	121
Fœniculi Aqua	1 to 2 oz.	121
„ Fructus		121
Fougère		120
Fowler's Solution		4
Fucus Vesiculosus	*Extract. liquid.* 1 drm.	122
Fumigatio Potassæ Nitratis		199
Galbanum		122
Galbani Emplastrum		122
„ *Pilula.* *See* Assafœtidæ composita		122
Galla	10 to 20 grs.	122
Gallæ *Decoctum*	1 in 8	123
„ „ *Suppositoria*	5 grs.	123
„ Tinctura	½ to 2 drms.	123
„ Unguentum	1 in 6½	123
„ „ c. Opio	Opium 1 in 15	123
Gallic Acid 3 to 5 grs.	10 to 60 in albumenuria	7
Gargarisma Iodi		142
„ *Myrrhæ*		171
„ *Plumbi*		191
„ *Potassæ Chloratis*		198
„ „ *Nitratis*		199
Gentianæ Radix	10 to 40 grs.	123
„ Extractum	10 to 15 grs.	124
„ Infusum comp.	1 to 2 oz.	124
„ Mistura	½ to 1 oz.	124
„ Tinctura composita	1 to 2 drms.	124
Girofles		70
Glycerine Cream		125
„ „ *with Camphor*		125
„ *Ointment*		126, 218
„ *Soap*		
Glycerinum	10 to 60 minims	124
„ Acidi Carbolici	5 to 10 minims	6

GLY	Dose.	Page
Glycerinum Acidi Gallici	10 to 60 minims	8
„ Acidi Tannici	10 to 40 minims	14
„ Boracis		53
Glycyrrhizæ Radix		126
„ Extractum		126
Gossypium		126
Granati Radicis Cortex		126
„ „ Decoctum	1 to 2 oz.	127
Granular preparations		278
Group Aquæ		38
„ Cataplasmæ		72
„ Confectiones		89
„ Decocta		98
„ Emplastra		101
„ Enemata		102
„ Extracta		104
„ Glycerina		125
„ Infusa		140
„ Linimenta		151
„ Liquores		153
„ Mistura		165
„ Mucilagines		169
„ Olea		172
„ Opium, preparations of		178
„ Pilulæ		184
„ Pulveres		202
„ Soda preparations		227
„ Spiritus		235
„ Succi		240
„ Syrupi		244
„ Tincturæ		250
„ Trochisci		252
„ Unguenta		253
„ Vina		257
„ Zinc preparations		258
Guaiaci Lignum		127
„ Mistura	½ to 2 oz.	128
„ Resina	10 to 30 grs.	127
„ Tinct. Ammoniata	½ to 1 drm.	128
Gum Gutti		61
Gummi Rubrum	5 to 10 grs.	74
„ *Rubri Decoctum*		74
„ „ *Syrupus*	½ to 1½ drms.	74
„ „ *Tinctura*	20 to 40 minims	74
Hair-Wash		66
Hæmatoxyli Lignum		128
„ Decoctum	1 to 2 oz.	128
„ Extractum	10 to 30 grs.	128
Hartshorn Spirit and Oil		28
Hemidesmi Radix		129

HEM	Dose.	Page
Hemidesmi Syrupus	1 to 4 drms.	129
Hirudo	30 to 60 minims	129
Hoffman's Anodyne Spirit		19
Hordeum decorticatum		129
Hordei Decoctum		129
Houblon		166
Huile de Foie et Morue		168
„ *Volatile de Carvi*		70
Hydrargyri Ammoniati Unguentum		137
„ *Ammonio-chloridum.* *See* Hydrargyrum Ammoniatum.		
„ *Bichloridum*		135
„ *Biniodidum*		132
„ *Chloridum*, former name for Calomel.	Now Hydr. Perchloridum.	
„ Iodidum rubrum	$\frac{1}{16}$ to $\frac{1}{8}$ gr.	132
„ „ „ Unguentum	1 in 28	133
„ „ viride	1 to 3 grs.	133
„ Nitratis Liquor acidus		133
„ „ Unguentum		134
„ *Nitrico-oxidum.* *See* Hydr. Oxid. Rub.		134
„ Oxidum rubrum	$\frac{1}{4}$ to 1 gr.	134
„ „ „ Unguentum		135
„ *præcipitatum album.* *See* Hydr. Ammoniatum.		
„ Perchloridum	$\frac{1}{16}$ to $\frac{1}{8}$ gr.	135
„ Perchloridi *Collyrium*		136
„ „ Liquor	30 to 120 minims	136
„ „ Lotio flava		136
„ „ *Unguentum*		136
„ Subchloridum	$\frac{1}{2}$ to 1 gr. alterative, 2 to 8 grs. purgative	136
„ Subchloridi Lotio nigra		137
„ „ Pilula composita	5 to 10 grs.	137
„ „ Unguentum	1 in 6$\frac{1}{2}$	137
„ Sulphas		137
„ Emplastrum		131
„ „ c. Ammonia		131
„ Linimentum		131
„ Pilula		131
„ Suppositoria		131
„ Unguentum		131
„ „ comp.		132
Hydrargyrum Ammoniatum		137
„ *c. Ammoniæ Muriate*		132
„ *Corrosivum Sublimatum.* *See* Hydr. Perchloridum		135
„ c. Creta	3 to 8 grs.	138
Hyoscyami Folia		138
„ Extractum	3 to 6 grs.	138
„ *Suppositoria*		139
„ Tinctura	15 to 60 minims	139
Hypochlorite de Chaux		60
Hypophosphite of Lime	3 to 5 grs.	60
„ of Soda		233

HYP	Dose.	Page
Hyposulphite of Soda		234
Iceland Moss Jelly		77
Infusa (*group*)		140
Infusum Anthemidis	1 to 3 oz.	33
„ *Armoraciæ compositum*	1 to 2 oz.	41
„ Aurantii	1 to 2 oz.	45
„ „ compositum	1 to 2 oz.	45
„ Buchu	1 to 2 oz.	54
„ Calumbæ	1 to 2 oz.	60
„ Caryophylli	1 to 2 oz.	70
„ Cascarillæ	1 to 2 oz.	71
„ Catechu	1 to 2 oz.	73
„ Chiratæ	1 to 2 oz.	77
„ Cinchonæ flavæ	1 to 2 oz.	82
„ „ *spissatum*		82
„ Cuspariæ	1 to 2 oz.	97
„ Cusso	4 oz.	97
„ Digitalis	¼ to ½ oz.	99
„ Dulcamaræ	1 to 2 oz.	100
„ Ergotæ	1 to 2 oz.	103
„ Gentianæ compositum	1 to 2 oz.	124
„ Krameriæ	1 to 2 oz.	147
„ Lini		152
„ Lupuli	1 to 2 oz.	156
„ Maticæ	1 to 2 oz.	162
„ Quassiæ	1 to 2 oz.	204
„ *Rhataniæ.* *See* Infus. Krameriæ.		
„ Rhei	1 to 2 oz.	208
„ Rosæ Acidum	1 to 2 oz.	212
„ „ *cum Acido Nitrico*	1 to 2 oz.	212
„ Senegæ	1 to 2 oz.	222
„ Sennæ	1 to 2 oz.	224
„ Serpentariæ	1 to 2 oz.	225
„ *Simarubæ*	1 to 2 oz.	225
„ Uvæ Ursi	1 to 2 oz.	255
„ Valerianæ	1 to 2 oz.	255
Inhalatio *See* Vapor.	For one Inhalation.	
„ Acidi Hydrocyanici		10 to 15 minims 9
„ Chlori		2 oz. Chloride of Lime 58
„ *Chloroformi*		15 minims 80
„ Conii		2 grs. Extract
„ Creasoti		12 minims 92
„ Iodi		1 drm. Tincture 142
„ *Iodi cum Conio*		142
Iodide of Ammonium	2 to 5 grs.	26
Iodoform	5 grs.	142
Iodum	½ gr.	141
„ Arsenici	$\frac{1}{30}$ gr.	5
Iodi *Gargarisma*		142
„ Linimentum	1 Iodine in 8	141

IOD	Dose.	Page
Iodi Liquor	1 in 24	141
„ Tinctura	5 to 20 minims	142
„ Unguentum	1 in 32	142
„ Vapor	1 drm. Tincture	142
Ipecacuanha	Expectorant, ½ to 2 grs. Emetic, 15 to 30 grs.	142
Ipecacuanhæ Pil. c. Scilla	5 to 10 grs.	143
„ Pulvis compositus	5 to 10 grs.	143
„ Syrupus	15 to 60 minims	143
„ Trochisci (¼ gr. each)	1 to 3 loz.	143
„ „ et Morphiæ	1 to 6 loz.	143
„ Vinum	5 to 40 minims	143
Iron Alum		24
Jalapa	10 to 30 grs.	143
Jalapæ Extractum	5 to 15 grs.	144
„ Pulvis comp.	10 to 20 grs.	144
„ Resina	2 to 5 grs.	144
„ Tinctura	½ to 2 drms.	144
Jalapine. See Jalapæ Resina	2 to 6 grs.	144
James's Fever Powders		34
Jeremie's Laudanum	10 to 20 minims	179
Jusquiame		138
Juniperi Oleum	1 to 3 minims	145
„ Spiritus	30 to 60 minims	145
Juniper Tar Soap		218
Kali. See Potassa.		
Kamala	60 to 120 grs.	145
„ *Tinctura*	1 to 2 drms.	145
Kino	10 to 30 grs.	146
„ Pulv. comp.	5 grs.	146
„ Tinctura	½ to 2 drms.	146
Kokum Oil		18
Krameriæ Radix	20 to 60 grs.	146
„ Extractum	5 to 20 grs.	147
„ Infusum	1 to 2 oz.	147
„ Tinctura	1 to 2 drms.	147
Kusso. See Cusso		97
Lac		147
Lactuca		147
Lactucæ Extractum	5 to 10 grs.	148
„ *Succus*	1 to 2 drms.	148
Lactucarium	3 to 8 grs.	148
Lactucarii Tinctura	30 to 60 minims	148
Laitue, Eau de		148
Lapis Divinus		96
Lard, substitutes for		18
Laudanum. See Tinct. Opii.		
„ *Jeremie's*	10 to 20 minims	179
„ *Sydenham's*	10 to 20 minims	179

LAU	Dose.	Page
Laurocerasi Folia		148
„ Aqua	5 to 30 minims	148
Lavandulæ Oleum	1 to 4 minims	149
„ Spiritus	30 to 60 minims	149
„ Tinctura comp.	½ to 2 drms.	149
Lemon Juice		150
„ „ *Artificial*		7
Lignum Guaiaci		127
Limon		149
Limonis Cortex		149
„ Oleum	1 to 4 minims	150
„ Succus	½ drm. to 4 oz.	150
„ Syrupus	1 to 2 drms.	150
„ Tinctura	½ to 2 drms.	150
Lini Cataplasma		152
„ Farina		152
„ Infusum		152
„ Oleum		152
„ Semen		152
Linimenta (*group*)		151
Linimentum Aconiti		16
„ Ammoniæ		29
„ Belladonnæ		49
„ „ *et Chloroformi*		50
„ Calcis		58
„ Camphoræ		62
„ „ compositum		62
„ *Cantharidis*, now called Liquor Epispasticus		66
„ *Capsici*		67
„ Chloroformi	1 in 2	79
„ *Crinale*		66
„ Crotonis	1 in 8	95
„ Hydrargyri	Ointment—1 in 3	131
„ Iodi	1 in 8	141
„ Opii		177
„ Potassii Iodidi c. Sapone		193
„ Saponis		217
„ *Simplex*		18
„ Sinapis composita	1 in 40 nearly	226
„ Terebinthinæ		247
„ „ Aceticum		248
Linum		152
Liquores (*group*)		153
Liquor Ammoniæ	10 to 20 minims	29
„ „ Acetatis	2 to 6 drms.	27
„ „ *Arsenitis*	2 to 8 minims	5
„ „ Citratis	2 to 6 drms.	28
„ „ fortior		29
„ Antimonii Chloridi		34
„ Arsenicalis	2 to 8 minims	4
„ Arsenici Hydrochloricus	2 to 8 minims	5

LIQ	Dose.	Page
Liquor *Arsenici et Hydrargyri Hydriodatis*	10 to 30 minims	5
„ Atropiæ	1 minim	43
„ „ Sulphatis, 4 grs. to 1 oz.	1 minim	44
„ Bismuthi Ammonio-citratis	½ to 1 drm.	52
„ *Calcii Chloridi*	30 minims	56
„ Calcis	½ to 2 oz.	59
„ „ Chloratæ	20 to 40 minims	57
„ „ saccharatus	15 to 60 minims	59
„ *Carbonas detergens*		93
„ Chlori	10 to 20 minims	78
„ *Chloroformi Camphoratus*		80
„ „ *compositus*	5 to 20 minims	80
„ Epispasticus, Blistering Liquid		66
„ Ferri Perchloridi	10 to 30 minims	114
„ „ „ fortior		113
„ „ Persulphatis		118
„ Hydrargyri Nitratis Acidus		133
„ „ Perchloridi	30 to 120 minims	136
„ Iodi	1 in 24	141
„ Lithiæ Effervescens	5 to 10 oz.	155
„ Magnesiæ Carbonatis	1 to 2 oz.	159
„ „ *Sulphatis*		160
„ Morphiæ Acetatis	10 to 60 minims	166
„ „ *Bimeconatis*	10 to 30 minims	178
„ „ Hydrochloratis	10 to 60 minims	167
„ *Plumbi Diacetatis* } „ Subacetatis }		190
„ „ „ dilutus		190
„ Potassæ	15 to 60 minims	194
„ „ *Arsenitis.* *See* Liquor Arsenicalis		4
„ „ Effervescens	5 to 10 oz.	197
„ „ Permanganatis	½ to ½ oz.	200
„ *Quiniæ Ammoniatæ*	30 to 60 minims	206
„ *Sedativus* (*Battley*)	10 to 20 minims	179
„ Sodæ	½ to 1 drm.	228
„ „ Arseniatis	2 to 5 minims	229
„ „ Chloratæ	10 to 20 minims	231
„ „ Effervescens		230
„ Strychniæ	4 to 10 minims	239
„ *Volatilis Cornu-Cervi*		28
„ Zinci Chloridi		259
Lithargyrum		189
Lithargyri Cremor		191
Lithia		154
Lithiæ Carbonas	3 to 6 grs.	154
„ „ Liquor Effervescens	5 to 10 oz.	155
„ Citras	5 to 10 grs.	155
Lobelia		155
„ Tinctura	10 to 30 minims	156
„ „ Etherea	10 to 30 minims	156
Lotio Benzoini		51

LOT	Dose.	Page
Lotio *Bismuthi*		53
„ *Boracis*		54
„ Hydrargyri flava		136
„ „ nigra		137
„ *Plumbi Acetatis*		188
„ „ *Diacetatis*		191
„ *Zinci Acetatis*		258
Lupulus		156
Lupuli Extractum	5 to 10 grs.	156
„ Infusum	1 to 2 oz.	156
„ Tinctura	½ to 2 drms.	157
Lupulina	5 to 10 grs.	156
„ *Extractum*	3 to 6 grs.	157
„ *Tinctura*	½ to 2 drms.	157
Magnesia	Antacid, 10 to 20 grs. Purgative, 20 to 60 grs.	157
„ levis	Antacid, 10 to 20 grs. Purgative, 20 to 60 grs.	158
Magnesiæ Carbonas	Antacid, 10 to 20 grs. Purgative, 30 to 60 grs.	158
Magnesiæ Carbonas levis	Antacid, 10 to 20 grs. Purgative, 30 to 60 grs.	159
„ Carbonatis Liquor	1 to 2 oz.	159
Magnesiæ Carbonas Ponderosa. *See* M. Carbonas		159
Magnesiæ Sulphas	2 to 4 drms.	159
„ „ *Liquor*		160
„ Sulphatis Enema	1 oz.	160
Magnesium		157
Manganesii Oxidum Nigrum		160
„ „ *præparatum*	10 to 30 grs.	160
„ *Sulphas*		160
Manna	2 to 8 drms.	161
Marmor album		161
Mastiche	20 to 40 grs.	161
Maticæ Folia	½ to 2 drms.	162
„ Infusum	1 to 2 oz.	162
„ *Tinctura*	1 to 2 drms.	162
Meconic Acid		175
Meconin		175
Mel		162
„ Boracis		53, 162
„ depuratum		162
Menthæ Piperitæ Aqua	1 to 2 oz.	163
„ „ Essentia	10 to 20 minims	163
„ „ Oleum	1 to 4 minims	163
„ „ Spiritus	30 to 60 minims	163
„ Viridis Aqua	1 to 2 oz.	164
„ „ Oleum	1 to 4 minims	164
Mezerei Cortex		164
„ „ Extractum Ethereum		164
„ „ *Unguentum*		165
Mica Panis		165
Mindererus Spirit. *See* Liquor Ammon. Acetatis.	2 to 6 drms.	27
Misturæ (*group*)		165

MIS	Dose.	Page
Mistura Acaciæ		1
„ Ammoniaci	½ to 1 oz.	25
„ Amygdalæ	1 to 2 oz.	31
„ *Amygdalæ Amaræ*	½ to 1 oz.	30
„ *Camphoræ*		62
„ *Cetacei*	1½ oz.	77
„ Creasoti	1 to 2 oz.	92
„ Cretæ	1 to 2 oz.	93
„ Ferri Aromatica	1 to 2 oz.	113
„ Ferri composita	1 to 2 oz.	108
„ Gentianæ composita	½ to 1 oz.	124
„ Guaiaci	½ to 2 oz.	128
„ *Moschi*	1 to 2 oz.	169
„ Scammonii	Infant, ½ to 1 oz. Adult, 1 to 2 oz.	220
„ Sennæ compos.	1 to 1½ oz.	224
„ Spiritus Vini Gallici	½ to 1½ oz.	237
Mixture for Cholera		94
„ *Whooping Cough*		85
Mori Succus		165
„ Syrupus	1 to 2 drms.	166
Morphia		174
Morphiæ *Bimeconatis Solutio*	10 to 30 minims	178
„ Acetatis	⅛ to ½ gr.	166
„ „ Liquor	10 to 60 minims	166
„ *Solution for hypodermic injection*		166
„ Hydrochloras	⅛ to ½ gr.	166
„ Hydrochloratis Liquor	10 to 60 minims	167
„ „ Suppositoria		167
„ „ Trochisci	1 to 6 loz.	167
„ „ „ et Ipecac.	1 to 6 loz.	167
„ *Murias.* *See* Morphiæ Hydrochloras.		
Morrhuæ Oleum	1 to 4 drms.	168
Moschus	5 to 10 grs.	169
Moschi Misturæ		169
Mucilagines (*group*)		169
Mucilago Acaciæ		1
„ „ *spissa et levis*		1
„ Amyli		31
„ Tragacanthæ		252
Muriate of Lime		56
Muriatic Acid		8
Mûrier Noir		165
Mynsicht's Elixir of Vitriol	5 to 10 minims	12
Myristica	5 to 15 grs.	169
Myristicæ *Adeps.* *See* Ol. Expressum		170
„ Oleum	2 to 6 minims	170
„ „ Expressum		170
„ Spiritus	30 to 60 minims	170
Myrrha	10 to 30 grs.	170
Myrrhæ *Gargarisma*		171
„ Tinctura	½ to 1 drm.	170

MYR	Dose.	Page
Myrrhæ Tinctura et Boracis		54
Narcein		175
Narcotina		174
Nectandræ Cortex		171
Nepenthe	15 to 30 minims	179
Nicotin		245
Nicotianin		245
Nitric Acid		10
Noix des Galles		123
Nux Vomica	1 to 3 grs.	171
Nucis Vomicæ Extractum	⅛ to 1 gr.	171
„ „ Tinctura	10 to 30 minims	172
Olea (*group*)		172
Oleum Amygdalæ	2 to 4 drms.	31
„ Anethi	1 to 4 minims	32
„ Anisi	1 to 4 minims	32
„ Anthemidis	2 to 4 minims	33
„ Cajuputi	1 to 5 minims	55
„ Carui	2 to 4 minims	70
„ Caryophylli	1 to 4 minims	70
„ Cinnamomi	1 to 4 minims	84
„ Copaibæ	5 to 30 minims	91
„ Coriandri	1 to 4 minims	91
„ Crotonis	⅛ to 1 minim	94
„ Cubebæ	5 to 20 minims	95
„ *Filicis Maris.* *See* Extractum	30 to 60 minims	121
„ *Jecoris Aselli*		168
„ Juniperi	1 to 3 minims	145
„ Lavandulæ	1 to 4 minims	149
„ Limonis	1 to 4 minims	150
„ Lini		152
„ Menthæ Piperitæ	1 to 4 minims	163
„ „ Viridis	1 to 4 minims	164
„ Morrhuæ	1 to 4 drms.	168
„ Myristicæ	2 to 6 minims	170
„ „ expressum		170
„ Olivæ	½ to 1 oz.	173
„ Pimentæ	1 to 3 minims	185
„ Ricini	Infant, 1 to 3 drms. Adult, ½ to 1 oz.	210
„ Rosmarini	2 to 5 minims	212
„ Rutæ	2 to 6 minims	213
„ Sabinæ	1 to 5 minims	214
„ *Santal flav.*		202
„ Sinapis		226
„ Theobromæ		248
„ Terebinthinæ	10 to 30 minims. Anthelm. 2 to 6 drms.	247
Olivæ Oleum	½ to 1 oz.	173
Opianine		175
Opii Aquæ		176

OPI	Dose.	Page
Opii Confectio	5 to 20 grs.	176
„ Emplastrum		176
„ Enema	½ drm. Tinct.	176
„ Extractum	½ to 1 gr.	176
„ „ liquidum	10 to 30 minims	177
„ Linimentum		177
„ *Pilula*, now Pil. Sapon. comp.	3 to 6 grs.	177
„ Pulv. comp.	2 to 5 grs.	177
„ Tinctura	10 to 30 minims	177
„ „ Ammoniat.	½ to 1 drm.	177
„ Trochisci	1 or 2 loz.	178
„ *Unguentum*		178
„ Vinum	10 to 40 minims	178
Opium	½ to 2 grs.	176
„ Group of Preparations, with Proportions		178
Opodeldoc. See Linimentum Saponis		217
„ *Steer's*		218
„ *Arnica*		42
Orge Perlé		129
Os Ustum		179
Ovi Vitellus		179
Oxide of Zinc Soap		218
Oxymel	1 to 2 drms.	163
„ Scillæ	½ to 2 drms.	221
Pancreatic Juice		180
Papaveris Capsula		180
„ Decoctum		180
„ Extractum	2 to 5 grs.	180
„ „ *liquidum*		181
„ Syrupus	1 drm.	180
Papaverin		174
Papier d'Albespeyres		66
„ *Épispastique*		65
Paramorphia		174
Paste, Arsenical		5
Pareiræ Radix	30 to 60 grs.	181
„ Decoctum	1 to 2 oz.	181
„ Extractum	10 to 20 grs.	181
„ „ liquidum	½ to 2 drms.	181
Parrish's Chemical Food		117
Pavot		180
Pearson's Solution of Soda	5 to 10 minims	229
Percolation, instructions for		277
Pepsine de Boudault	15 grs.	182
„ *Lozenges*	3 loz.	182
„ *Pills*		182
„ *Wine*		182
Pepsina Porci	2 to 4 grs.	182
Pessaries (group)		279
„ *Acidi Tannici*	10 grs.	15

PES	Dose.	Page
Pessaries.—Plumbi Acet.	7½ grs. each	188
„ „ „ *c. Opio*	5 grs. 2 grs. Opium each	188
„ „ *Iodidi*	5 grs.	189
„ *Potassii Bromidi*	10 grs. each	193
„ „ *Iodidi*	10 grs. each	194
„ *Sodæ Bicarbonatis*	15 grs.	230
Petroleum Ether		182
Phosphoric Acid, diluted	10 to 20 minims	11
Phosphorus		182
Phosphate of Ammonia	5 to 20 grs.	30
Physostigmatis Faba		183
„ Extractum	$\frac{1}{16}$ to $\frac{1}{4}$ gr.	183
Pierre Divine		96
Pilulæ (*group*)		183
Pilula Aloes Barbadensis	4 to 8 grs.	21
„ „ *c. Sapone.* *See* Pil. Aloes Barbadensis		21
„ „ *diluta.* *See* Pil. Aloes Barbadensis		21
„ „ et Assafœtidæ	5 to 10 grs.	22
„ „ et Ferri	5 to 10 grs.	21
„ „ et Myrrhæ	5 to 10 grs.	22
„ „ Socotrinæ	5 to 10 grs.	22
„ Assafœtidæ composita	5 to 10 grs.	43
„ *Calomelanos composita.* *See* Pil. Hydrarg. Subchloridi		137
„ Cambogiæ composita	5 to 10 grs.	61
„ Colocynthidis composita	5 to 10 grs.	88
„ „ et Hyoscyami	5 to 10 grs.	88
„ Conii composita	5 to 10 grs.	89
„ Ferri Carbonatis	5 to 20 grs.	109
„ „ Iodidi	3 to 8 grs.	112
„ *Galbani composita.* *See* Pil. Assaf. Co.		43
„ Hydrargyri	Alterative, 3 to 6 grs. Purgative, 10 grs.	131
„ „ Subchloridi composita	5 to 10 grs.	137
„ *Opii.* *See* Pil. Saponis composita.		
„ Ipecacuanhæ c. Scilla	5 to 10 grs.	143
„ *Picis*	10 to 15 grs.	186
„ Plumbi c. Opio	4 grs.	187
„ Quiniæ	2 to 10 grs.	206
„ Rhei composita	5 to 10 grs.	209
„ Saponis composita	3 to 6 grs.	177
„ Scillæ composita	5 to 10 grs.	221
Pimenta	10 to 30 grs.	184
Pimentæ Aqua	1 to 2 oz.	185
„ Oleum	1 to 3 minims	185
Piper	5 to 20 grs.	185
Piperis Confectio.	60 to 120 grs.	185
Pix Burgundica		185
Picis Burgundicæ Emplastrum		185
Pix liquida	20 to 60 minims	186
Picis liquidæ *Aqua*		186
„ „ *Pilula*		186
„ „ Unguentum		186

PLA	Dose.	Page
Plasma. *See* Glycerinum Amyli		31, 186
Plumbi Acetas	2 to 8 grs.	187
„ Carbonas		188
„ Carbonatis Unguentum	1 in 8	188
„ *Gargarisma*		191
„ *Lotio*		188
„ Iodidum		189
„ Iodidi Emplastrum		189
„ „ Unguentum	1 in 8	189
„ Nitras		189
„ Oxidum		189
„ Oxidi Emplastrum		189
„ Pil. c. Opio	4 grs.	187
„ Subacetatis Liquor		190
„ „ dilutus		190
„ „ Unguentum comp.		190
„ Suppositoria comp.	3 grs. each. 1 gr. Opium	188
„ Unguentum	1 in 37	188
Plumbum		187
Podophylli Radix	10 to 20 grs.	191
„ Resina	¼ to 2 grs.	191
Poivre Noir		185
„ *à Queue*		95
„ *de Guinée*		67
Pommade Stibiée		47
Potassa. *See* Potassa Caustica.		
Potassa Caustica		194
„ „ Liquor		194
„ *c. Calce*		195
„ Sulphurata	3 to 8 grs.	195
„ „ Unguentum	1 in 15½	195
Potassæ Acetas	10 to 20 grs.	196
„ Bicarbonas	10 to 20 grs.	196
„ Liq. Effervescens	5 to 10 oz.	197
„ Bichromas		197
„ *Bitartras.* *See* Potassæ Tartras Acida.		
„ *Boro-tartras.* Soluble Cream of Tartar		201
„ Carbonas	5 to 12 grs.	197
„ Chloras	10 to 20 grs.	198
„ Chloratis Trochisci. 5 grs. each.	Dose 1 to 6 loz.	198
„ „ *Gargarisma*		198
„ Citras	20 to 60 grs.	198
„ *Hydras.* *See* Potassa Caustica.		
„ Liquor		194
„ Nitras	5 to 20 grs.	199
„ Nitratis *Fumigatio*		199
„ „ *Gargarisma*		199
„ Permanganas	1 to 2 grs.	199
„ Permanganatis Liquor	2 to 4 drms.	200
„ Prussias Flava		200
„ Sulphas	10 to 20 grs.	200

POT	Dose.	Page
Potassæ *Sulphis*	10 grs.	200
„ Tartras	Alterative, 20 to 60 grs. Purgative, 120 to 200 grs.	201
„ „ Acida.	Diuretic, 20 to 60 grs. Aperient, 60 to 120 grs.	201
Potassii Bromidum	5 to 40 grs.	192
„ Iodidum	2 to 10 grs.	193
„ Iodidi Linimentum c. Sapone		193
„ „ Unguentum		193
Potassium		192
Poudre Antimoniale de James		34
Prunum		202
Prussic Acid	2 to 8 minims	8
Pterocarpi Lignum		202
Pulveres (*group*)		202
Pulvis Amygdalæ composita	60 to 120 grs.	31
„ Antimonialis	2 to 6 grs.	34
„ *Aromaticus.* *See* Pulv. Cinnam. comp.		84
„ Catechu compositus	15 to 30 grs.	73
„ Cinnamomi comp.	3 to 10 grs.	84
„ Cretæ Aromaticus	30 to 60 grs.	93
„ „ „ c. Opio	10 to 40 grs.	94
„ Ipecacuanhæ compositus	5 to 10 grs.	143
„ „ *c. Opio*		
„ Jalapæ compositus	10 to 20 grs.	144
„ Kino compositus	5 grs.	146
„ „ *c. Opio*		
„ Opii compositus	2 to 5 grs.	177
„ Rhei compositus	30 to 60 grs.	209
„ *Salinus Anticholericus*	1 drm.	230
„ Scammonii compositus	10 to 20 grs.	220
„ Tragacanthæ compositus	10 to 60 grs.	252
Pyrethri Radix		203
„ Tinctura		203
Pyroligneous Acid		2
Pyroxylin		203
Quassiæ Lignum		204
„ Extractum	3 to 5 grs.	204
„ Infusum	1 to 2 oz.	204
„ Tinctura	1 to 2 drms.	204
Quercus Cortex	30 to 120 grs.	204
„ Decoctum	1 to 2 oz.	205
Quiniæ *Arsenias*	$\frac{1}{10}$ gr.	206
„ Sulphas	1 to 5 grs.	205
„ Pilula	2 to 10 grs.	206
„ Tinctura	1 to 1½ drm.	206
„ Vinum	½ to 1 oz.	206
„ *Valerianas*	1 to 3 grs.	206
„ *Ammoniatæ Liquor*	½ to 1 drm.	206
„ *Dikinatis Syrupus*	½ to 1 drm.	207
„ *Hydriodatis Syrupus*	1 drm.	207
Quinquina		82

QUI	Dose.	Page
Quinquina Teinture de		83
Resina		207
„ Jalapæ	2 to 6 grs.	144
Resinæ Emplastrum		207
„ Unguentum		207
Rhamni Succus		207
„ Syrupus	1 drm.	207
Rhatania. *See* Krameria		130
Rhei Radix	Stom. 1 to 5 grs. Purg. 10 to 20 grs.	208
„ Extractum	3 to 6 grs. Br. Ph. dose 5 to 20 grs.	208
„ Infusum	1 to 2 oz.	208
„ Pilula comp.	5 to 10 grs.	209
„ Pulv. comp.	½ to 1 drm. 5 to 10 grs. for a child	209
„ Syrupus	1 to 4 drms.	209
„ Tinctura	1 to 2 drms.	209
„ Vinum	1 to 2 drms.	209
Rhœados Petala		210
„ Syrupus	1 to 2 drms.	210
Ricini Oleum	Adult, ½ to 1 oz. Infant, 1 to 3 drms.	210
Rochelle Salt		228
Rosa caninæ Fructus		211
„ „ Confectio		211
Rosæ centifoliæ Petala		211
„ Aqua		211
„ Gallicæ Petala		211
„ „ Confectio	½ to 1 drm.	212
„ Infusum Acidum	1 to 2 oz.	212
„ „ *c. Acido Nitrico*		212
„ Syrupus	1 to 2 drms.	212
Rosmarini Oleum	2 to 5 minims	212
„ Spiritus	10 to 30 minims	213
Rutæ Oleum	2 to 6 minims	213
Sabadilla	4 to 6 grs.	213
Sabinæ cacumina	5 to 10 grs. powder	213
„ Oleum	1 to 5 minims	214
„ Tinctura	15 to 30 minims	214
„ Unguentum	1 in 3ß	214
Saccharum purificatum		214
„ Lactis	1 to 2 drms.	215
Safran		94
St. Ignatius's Bean		172
Sal Ammoniac		26
Sal Polychrest		200
Salicinum	5 to 10 grs.	215
Sambuci Flores		215
„ „ Aqua		215
„ „ *Unguentum*		216
Santonica	10 to 60 grs.	216
Santoninum	Infant, 2 to 6 grs.	216

SAP	Dose.	Page
Sapo		216
„ durus	5 to 15 grs.	217
Saponis Emplastrum		217
„ „ Cerati		217
„ Linimentum		217
„ Pilula comp. *See* Opium		177
Sapo durus medicatus		218
„ mollis		218
Sarsæ Radix		218
„ Decoctum	½ to 1 pint daily	218
„ „ compositum	½ to 1 pint daily	218
„ Extractum liquidum	1 to 4 drms.	219
„ „ „ *compositum*	1 to 4 drms.	219
Sassafras Radix		219
Scammoniæ Radix		220
„ Resina	4 to 8 grs.	220
Scammonii Confectio	10 to 30 grs.	220
„ Mistura	2 oz.	220
„ Pulvis compositus	10 to 20 grs.	220
Scammonium	5 to 10 grs.	219
Scheele's Prussic Acid		9
Scilla	1 to 2 grs.	221
Scillæ Acetum	15 to 40 minims	221
„ Oxymel	½ to 1 drm.	221
„ Pil. comp.	5 to 10 grs.	221
„ Syrupus	½ to 1 drm.	221
„ Tinctura	15 to 30 minims	222
Scoparii Cacumina		222
„ Decoctum	2 to 4 oz.	222
„ Succus	1 to 2 drms.	222
Seidlitz Powder		228
Senegæ Radix	15 to 20 grs. powder	222
„ Infusum	1 to 2 oz.	222
„ Tinctura	½ to 2 drms.	223
Senna Alexandrina	10 to 30 grs. powder	223
„ Indica	10 to 30 grs.	223
Sennæ Confectio	1 to 2 drms.	223
„ Infusum	1 to 2 oz.	224
„ Mistura comp.	1 to 1½ oz.	224
„ Syrupus	1 to 2 drms.	224
„ Tinctura	2 to 8 drms.	224
Serpentariæ Radix	10 to 15 grs. powder	224
„ Infusum	1 to 2 oz.	225
„ Tinctura	½ to 2 drms.	225
Sevum præparatum		225
Simaruba	15 to 30 grs.	225
Simarubæ Infusum	1 to 2 oz.	225
Simaba Cedron Semen	1 to 3 grs.	225
Sinapis		226
„ Cataplasma		226
„ Liniment. comp.		226

SIN	Dose.	Page
Sinapis Oleum		226
Sinapine paper		226
Soaps, various		218
Soda caustica		227
„ Tartarata	2 to 4 drms.	228
Soda-water		230
Sodæ Acetas		229
„ Arsenias	$\frac{1}{16}$ to $\frac{1}{8}$ gr.	229
„ Arseniatis Liquor	2 to 5 minims	229
„ *Biboras.* *See* Borax.		
„ Bicarbonas	10 to 30 grs.	230
„ Carbonas	10 to 30 grs.	231
„ „ exsiccata	3 to 10 grs.	231
„ Chloratæ Cataplasma		232
„ „ Liquor	10 to 20 minims	231
„ Citro-tartras effervescens	1 to 2 drms.	232
„ *et Potassæ Tartras*	$\frac{1}{4}$ to 1 oz.	228
„ Group		227
„ *Hypophosphitis Solutio*		233
„ *Hyposulphis*	10 to 60 grs.	234
„ Liquor		228
„ „ effervescens		230
„ Nitras		233
„ *Pessary*	Bicarb. 15 grs.	230
„ Phosphas	$\frac{1}{4}$ to 1 oz.	233
„ Sulphas	$\frac{1}{2}$ to 1 oz.	233
„ *Sulphis*	10 to 60 grs.	234
„ Trochisci	1 to 6 loz.	230
„ Valerianas	1 to 5 grs.	234
Sodii Chloridum	Tonic, 10 to 60 grs. Cathartic, 2 to 4 drms.	234
Sodium		226
Soluble Cream of Tartar		201
Solutio Sodæ Hypophosphitis		233
„ *solvens mineralis* (*De Valangin*)	3 to 10 minims	5
Solution of Ammonia		29
„ „ „ Strong		29
„ „ Arsenic (Liquor Arsenicalis)	2 to 8 minims	4
„ Hydrochloric of Arsenic	2 to 8 minims	5
„ *Donovan's*	10 to 30 minims	5
„ of Acetate of Ammonia	2 to 6 drms.	27
„ „ *Bimeconate of Morphia*	10 to 30 minims	178
„ „ Chloride of Antimony		34
„ „ Citrate of Ammonia		28
Spiritus (*group*)		235
„ Ætheris	30 to 60 minims	19
„ *Ætheris Oleosus*		19
„ „ *Nitrici.* *See* Sp. Æ. Nitrosi.		
„ „ Nitrosi	$\frac{1}{2}$ to 2 drms.	235
„ Ammoniæ Aromaticus	20 to 60 minims	28
„ „ Fœtidus	$\frac{1}{2}$ to 1 drm.	29
„ Armoraciæ compositus	1 to 3 drms.	41

SPI	Dose.	Page
Spiritus Cajuputi, 1 in 50	30 to 60 minims	56
„ Camphoræ, 1 in 10	10 to 30 minims	63
„ Chloroformi, 1 in 20	10 to 60 minims	79
„ Juniperi, 1 in 50	30 to 60 minims	145
„ Lavandulæ	30 to 60 minims	149
„ Menthæ Piperitæ, 1 in 50	30 to 60 minims	163
„ *Mindererus*	2 to 6 drms.	27
„ Myristicæ, 1 in 50	30 to 60 minims	170
„ rectificatus, sp. g. ·838		236
„ Rosmarini, 1 in 50	10 to 30 minims	213
„ *Sal Volatile*		28
„ tenuior, sp. g. ·920		237
„ Vini Gallici		237
„ „ „ Mistura		237
Spirit of Hartshorn		28
St. Ignatius's Bean		172
„ „ „ *Extract*		172
St. John Long's Liniment		248
Staphysagria		238
Steer's Opodeldoc		218
Stevens' Powders		230
Stibium Oxidatum		34
Stramonii Semina		238
„ Extractum	¼ gr.	238
„ Tinctura	10 to 20 minims	238
Strychnia	$\frac{1}{30}$ to $\frac{1}{12}$ gr.	238
Strychniæ Liquor	4 to 10 minims	239
Styrax præparatus	10 to 20 grs.	239
Styptic Colloid		87
Succi (*group*)		240
Succus *Aconiti*	15 to 20 minims	16
„ *Belladonnæ*	4 to 30 minims	50
„ Conii	30 to 60 minims	90
„ *Digitalis*	5 to 10 minims	99
„ *Lactucæ virosæ*	1 to 2 drms.	148
„ Limonis	½ drm. to 4 oz.	148
„ Mori		165
„ Rhamni		207
„ Scoparii	1 to 2 drms.	222
„ Taraxaci	2 to 4 drms.	246
Sulphate of Quinine	1 to 5 grs.	205
„ „ *with Nitric Acid*		10
Sulphur		240
„ præcipitatum	10 to 20 grs.	241
„ sublimatum	Stimulant, 10 to 20 grs. Laxative, 30 to 60 grs.	240
Sulphuric Acid		12
Sulphuris Confectio	1 to 2 drms.	241
„ Iodidum		241
„ Iodidi Unguentum	1 in 17	242
„ Unguentum	1 in 5	241
Sulphurous Acid	1 drm.	13

SUM	Dose.	Page
Sumbul Radix		242
„ Tinctura	15 to 30 minims	242
Suppositoriæ, not officinal (group)		278
Suppositoria, officinal (*group*)		242
„ Acidi Tannici	contains 3 grs.	14
„ „ „ *Vaginal*	„ 10 grs.	15
„ *Belladonnæ*	1 gr.	50
„ Hydrargyri	5 grs. ointment	131
„ *Hyoscyami*	5 grs. Extract	139
„ Morphiæ	½ gr.	167
„ Plumbi comp.	3 grs. Acet. Lead 1 gr. Powdered Opium	188 188
„ *Podophylli*	1 gr. each	191
Sydenham's Laudanum	10 to 20 minims	179
Symphytum		242
Syrup of Dikinate of Quinine	½ to 1 drm.	207
Syrupi (*group*)		244
Syrupus		214
„ Aurantii	1 to 2 drms.	45
„ „ Floris	1 to 2 drms.	44
„ *Codeiæ*	1 to 2 drms.	179
„ Ferri Iodidi	20 to 60 minims	112
„ „ Phosphatis	1 to 4 drms.	117
„ „ „ *comp., Parrish*	1 to 2 drms.	117
„ „ *Hypophosphatis*	1 drm.	117
„ *Ipecacuanhæ*	15 to 60 minims	143
„ *Gummi Rubri*	½ to 1 drm.	74
„ Hemidesmi	1 to 4 drms.	129
„ Limonis	1 to 2 drms.	150
„ Mori	1 to 2 drms.	166
„ *Morphiæ*	1 to 2 drms.	179
„ Papaveris	1 to 2 drms.	180
„ *Quiniæ Hydriodatis*		207
„ Rhamni	1 drm.	207
„ Rhei	1 to 4 drms.	209
„ Rhœados	1 to 2 drms.	210
„ Rosæ Gallicæ	1 to 2 drms.	212
„ Scillæ	½ to 1 drm.	221
„ Sennæ	1 to 2 drms.	224
„ Tolutanus	1 to 2 drms.	47
„ Zingiberis	1 to 4 drms.	263
Tabaci Folia		244
„ Enema	20 grs.	245
Tamarindus	¼ oz.	245
Tannic Acid		14
„ „ Suppositories	3 grs.	14
Tar *Capsules*	2 capsules	186
„ *Pills*		186
„ *Water*		186
„ Ointment		186

TAR	Dose.	Page
Taraxaci Radix		246
„ Decoctum	2 to 4 oz.	246
„ Extractum	5 to 15 grs.	246
„ Succus	2 to 4 drms.	246
Tartaric Acid		15
Terebinthina Canadensis		247
Terebinthinæ Confectio	1 to 4 drms.	247
„ Enema	1 oz.	247
„ Linimentum	1 in $1\frac{1}{8}$	247
„ „ Aceticum	1 in 3	248
„ Oleum	10 to 30 minims	247
„ Unguentum	1 in $2\frac{1}{2}$	248
Tetrachloride of Carbon		80
Theobromæ Oleum		248
Theriaca		248
Thus Americanum		249
Tincturæ (*group*)		250
Tinctura Aconiti	10 to 15 minims	16
„ Aloes	1 to 3 drms.	23
„ *Ammon. composita*	5 to 10 minims	30
„ Arnicæ	1 to 2 drms.	42
„ Assafœtidæ	½ to 1 drm.	43
„ Aurantii	1 to 2 drms.	45
„ Belladonnæ	5 to 20 minims	49
„ *Benzoini*		51
„ Benzoini composita	½ to 1 drm.	50
„ Buchu	1 to 2 drms.	54
„ Calumbæ	½ to 2 drms.	61
„ Camphoræ composita „ *Camphoræ c. Opio*	15 to 60 minims	63
„ Cannabis Indicæ	5 to 20 minims	64
„ Cantharidis	5 to 20 minims	66
„ Capsici	10 to 20 minims	67
„ Cardamomi composita	½ to 2 drms.	69
„ Cascarillæ	½ to 2 drms.	71
„ Castorei	½ to 2 drms.	72
„ Catechu	½ to 2 drms.	73
„ Chiratæ	Brit. 1867, ½ to 2 drms. 15 to 60 minims	78
„ Chloroformi composita	20 to 60 minims	80
„ Cinchonæ composita	½ to 2 drms.	83
„ „ flavæ	1 to 2 drms.	82
„ Cinnamomi	1 to 2 drms.	84
„ Cocci	30 to 90 minims	85
„ *Colchici composita*	15 to 30 minims	86
„ „ *Florum*	10 to 30 minims	86
„ „ Seminis	15 to 30 minims	86
„ Conii Fructus	½ to 1 drm.	90
„ Croci	½ to 2 drms.	94
„ Cubebæ	1 to 2 drms.	95
„ Digitalis	10 to 30 minims	99
„ Ergotæ	15 to 60 minims	103

TIN	Dose	Page
Tinctura Ferri Acetatis	5 to 30 minims	107
„ „ „ *Æther*	10 to 20 minims	107
„ „ *Muriatis* / „ Perchloridi	10 to 30 minims	114
„ Gallæ	½ to 2 drms.	123
„ Gentianæ composita	1 to 2 drms.	124
„ Guaiaci Ammoniata	½ to 1 drm.	128
„ *Gummi Rubri*		74
„ Hyoscyami	15 to 60 minims	139
„ Iodi	5 to 20 minims	142
„ Jalapæ	½ to 2 drms.	144
„ *Kamalæ*	1 to 2 drms	145
„ Kino	½ to 2 drms.	146
„ Krameriæ	1 to 2 drms.	147
„ *Lactucarii*	30 to 60 minims	148
„ Lavandulæ composita	½ to 2 drms.	149
„ Limonis	½ to 2 drms.	150
„ Lobeliæ	10 to 30 minims	156
„ „ Ætherea	10 to 30 minims	156
„ Lupuli	½ to 2 drms.	157
„ *Lupulinæ*	½ to 2 drms.	157
„ *Maticæ*	1 to 2 drms.	162
„ *Myrrhæ et Boracis*		54
„ Myrrhæ	½ to 1 drm.	170
„ Nucis Vomicæ	10 to 30 minims	172
„ Opii	10 to 30 minims	177
„ „ Ammoniati	½ to 1 drm.	177
„ Pyrethri		203
„ Quassiæ	1 to 2 drms.	204
„ Quiniæ	1 to 1½ drms.	206
„ Rhei	Stom. 1 to 2 drms. Purgative, ½ to 1 oz.	209
„ Sabinæ	15 to 30 minims	214
„ Scillæ	15 to 30 minims	221
„ Senegæ	½ to 2 drms.	223
„ Sennæ	2 to 8 drms.	224
„ Serpentariæ	½ to 2 drms.	225
„ Stramonii	10 to 20 minims	238
„ Sumbul	15 to 30 minims	242
„ *Thebaicæ*	6 to 10 minims	179
„ Tolutana	15 to 30 minims	47
„ Valerianæ Ammoniata	½ to 1 drm.	256
„ Valerianæ	1 to 2 drms.	255
„ Veratri Viridis	5 to 20 minims	256
„ Zingiberis	10 to 30 minims	262
„ „ fortior	5 to 20 minims	262
Tisane d'orge		130
Tragacantha	20 grs.	251
Tragacanthæ Mucilago	1 oz.	252
„ Pulv. comp.	10 to 60 grs.	252
Tritici Repentis Decoctum	4 to 8 oz.	252
Trochisci (*group*)		252

TRO		Dose	Page
Trochisci Acidi Tannici	½ gr. each	1 to 6 lozenges	14
„ *Ammonii Bromidi*	2 grs. each	1 to 3 lozenges	26
„ Bismuthi	2 grs. each	1 to 6 lozenges	52
„ Catechu	1 gr. each	1 to 3 lozenges	73
„ „ et Ipecac.	$\frac{1}{12}$ gr., $\frac{1}{36}$ gr. Morph.	1 to 6 lozenges	167
„ Ferri Redacti	1 gr. each	1 to 6 lozenges	119
„ Morphiæ	$\frac{1}{36}$ gr. each	1 to 2 lozenges	167
„ Ipecacuanhæ	¼ gr. each	1 to 3 lozenges	143
„ „ et Morphiæ		1 to 6 lozenges	143
„ Opii	$\frac{1}{10}$ gr. Ext.	1 to 2 lozenges	178
„ Potassæ Chloratis	5 grs.	1 to 6 lozenges	198
„ Sodæ Bicarb.	5 grs.	1 to 6 lozenges	230

Ulmi Cortex			253
„ Decoctum		2 to 4 oz.	253
Unguenta (*group*)			253
Unguentum Aconitiæ		1 in 60	17
„ Antimonii Tartarati		1 in 5	36
„ Atropiæ		1 in 64	44
„ *Balsami Peruviani*			46
„ Belladonnæ		1 in 6½	49
„ *Benzoini*			51
„ *Bismuthi*			52
„ *Boracis*			54
„ Cadmii Iodidi		1 in 8	55
„ *Calomelanos*, now Hydr. Subchloridi			137
„ Cantharidis		1 in 8	66
„ *Chloroformi*		1 in 3	80
„ Cetacei		1 in 5	76
„ *Citrinum*. *See* Ung. Hydr. Nitr.			134
„ Creasoti		1 in 9	92
„ Elemi		1 in 5	101
„ Gallæ		1 in 6½	123
„ „ c. Opio		Opium 1 in 15	123
„ Hydrargyri		Mercury 1 in 2	131
„ „ *c. Ammoniæ Muriate*			132
„ „ Ammoniati		1 in 8	137
„ „ *Bichloridi*			136
„ „ compositum		Mercury, 1 in 4½	132
„ „ Iodidi rubri		1 in 28	133
„ „ Nitratis		Mercury, 1 in 15½	134
„ „ Oxidi rubri		1 in 8	135
„ „ Subchloridi		1 in 6⅔	137
„ Iodi		Iodine, 1 in 31	142
„ *Mezerei*			165
„ *Opii*			178
„ Picis liquidæ		5 in 7	186
„ Plumbi Acetatis		1 in 37½	188
„ „ Carbonatis		1 in 8	188
„ „ Iodidi		1 in 8	189
„ „ Subacetatis compos.		1 in 5½	190

UNG	Dose.	Page
Unguentum Potassæ Sulphuratæ	1 in 15½	195
„ Potassii Iodidi	1 in 8¾	193
„ *Præcipitati albi.* *See* Ung. Hydrarg. Ammon.		137
„ Resinæ	1 in 3½	207
„ Sabinæ	nearly 1 in 3⅜	214
„ *Sambuci*		216
„ Simplex		74
„ *Stimulans*		66
„ Sulphuris	1 in 5	241
„ „ Iodidi	1 in 17	242
„ Terebinthinæ	Oil, 1 in 2⅛	248
„ Veratriæ	1 in 60	256
„ Zinci Oxidi	1 in 6½	260
Uvæ Ursi Folia	10 to 30 grs.	254
„ Infusum	1 to 2 oz.	255
Uvæ		255

Vaginal Suppositories. *See* Pessaries.		
Valerianæ Radix	10 to 30 grs. powder	255
„ Infusum	1 to 2 oz.	255
„ Tinctura	1 to 2 drms.	255
„ „ Ammoniata	½ to 1 drm.	256
Vapor Acidi Hydrocyanici	10 to 15 minims	9
„ Chlori	2 oz. Chlorinated Lime	58
„ *Chloroformi*	15 minims	80
„ Conii	2 grs. Extract	90
„ Creasoti	12 minims	92
„ Iodi	1 drm. Tinct.	142
Veratria		256
Veratriæ Unguentum	1 in 60	256
Veratri Viridis Radix	4 to 6 grs.	256
„ „ Tinctura	5 to 20 minims	256
Vina (*group*)		257
Vinaigre de Quatre Voleurs		4
„ *Radicale* (Glacial Acetic Acid)		4
Vinegar, British		2
„ *Aromatic*		4
„ distilled		3
„ *of Four Thieves*		4
Vinum Aloes	1 to 2 drms.	23
„ Antimoniale	10 to 60 minims	37
„ Aurantii		45
„ Colchici	10 to 30 minims	86
„ Ferri	1 to 4 drms.	120
„ „ Citratis	1 to 4 drms.	110
„ Ipecacuanhæ	Expectorant, 5 to 40 minims. Emetic, 3 to 6 drms.	143
„ *Seminis Colchici*	20 minims	86
„ Opii	10 to 40 minims	177
„ Quiniæ	½ to 1 oz.	206
„ Rhei	1 to 2 drms.	209
„ *Stibiatum*		37

VIN	Dose.	Page
Vinum Xericum		257
Vitriol Elixir and Mynsicht's Elixir	5 to 10 minims	12
Water, degrees of purity of the various supplies		37
Waters, distilled (*group*)		38
Whooping Cough Mixture		85
Zincum		257
Zincum (group)		258
„ Granulatum		258
Zinci Acetas		258
„ *Acetatis Lotio*		258
„ Carbonas	2 to 10 grs.	259
„ Chloridum	½ to 2 grs.	259
„ Chloridi Liquor		259
„ Oxidum	2 to 10 grs.	260
„ Unguentum	1 in 6½	260
„ Sulphas	Tonic, 1 to 2 grs. Emetic, 10 to 30 grs.	260
„ Valerianas	1 to 6 grs.	261
Zingiber	10 to 20 grs.	261
Zingiberis *Essentia*		262
„ Syrupus	1 to 4 drms.	262
„ Tinctura	10 to 30 minims	262
„ „ fortior	5 to 10 minims	262

THE END.

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